

THE READING TEACHER'S READER

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Edited by

OSCAR S. CAUSEY

DIRECTOR OF READING LABORATORY AND

PROFESSOR OF EDUCATION

TEXAS CHRISTIAN UNIVERSITY

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FOREWORD

To some, it may seem paradoxical that during the 1950's we have witnessed on the one hand the growth of television to its present high status among the media of communication and entertainment, and on the other hand a greater interest than ever before in reading and its pedagogy. The simultaneity of these trends need not surprise anyone; in the past new modes of communication have often coincided with renewed interest in reading. The degree to which television has actually contributed to the increased interest in reading is as yet undetermined and may never be well defined, because other social forces are also operating to arouse an awareness of reading and its teaching.

This general interest in the subject of reading has been reflected and amplified by a variety of magazine and newspaper articles and by the notorious book *Why Johnny Can't Read*. Heretofore, elementary school teachers have not had to keep abreast of developments in reading methods at the high school or college level, and college reading teachers have managed to stay somewhat naïve about grade school reading instruction. The tremendous interest in reading has forced all reading teachers to be conversant with methods and materials at every level. College teachers must be prepared to answer questions about word attack skills, and primary school teachers must be ready for the parents who ask questions about rapid reading. This book deals with all major aspects of reading at every level. It will add to the college reading instructor's sophistication in the areas of basic elementary methods and will expand the primary teacher's knowledge of the sort of reading she must expect her pupils to do as they mature.

In 1951 Oscar S. Causey, of Texas Christian University, wrote to a number of his confreres in colleges and universities of the Southwest to ask if they were interested in meeting at Texas Christian for the purpose of exchanging ideas about reading. Mr. Causey's inquiry resulted in the formation of the Southwest Reading Conference, which held its first meeting in April, 1952. The Conference has held annual meetings each December since and has grown from a provincial agency involving only five states to a national organization.

While it is true that the Southwest Reading Conference has an executive committee to determine policies, the Conference is still chiefly the product of Oscar S. Causey's ideas and efforts. He has planned most of the annual meetings and edited the yearbooks, and whenever his term as chairman of the executive committee to determine policies, the Conference is still chiefly the product of Oscar S. Causey. Southwest Reading Conference exists today because of his skill in planning, selecting, and editing; these same skills are used to the advantage of all reading teachers in this book.

William Eller

State University of Iowa

PREFACE

This collection of articles and reports is designed as a textbook for college students enrolled in reading methods courses and as a reference book for in-service reading teachers. The book reproduces a critically selected group of writings of many widely recognized authorities in the field of reading; these articles have appeared in various professional publications which carry information on reading methods and materials. Footnote documentations and reference lists which originally accompanied some articles have been deleted in the reproductions in this book within the separate writings. The editor has endeavored to establish the identity of all persons referred to in the articles and the titles of their works to assist the reader in distinguishing names and sources. Some selections are controversial. These are included for the purpose of stimulating thinking and encouraging critical reading.

The readings in Part I present information relating to the nature of the reading process. One of the most difficult and time-consuming tasks is to learn to read effectively and critically. Because of experimentation and research in the fields of psychology and education, the nature of the reading process is better understood now than formerly. These nine selections in Part I will help those who are directing others to learn to read or to read more critically.

The degree of the teacher's success in directing the student in the reading process depends to a considerable extent upon the methods used. The assemblage of thirty-five articles and reports in Part II presents effective methods and procedures. It is generally recognized, however, that no single method can be chosen and used by all teachers. Rather, each instructor must develop his or her own methods, which are often composite.

During the latter part of the nineteenth century and the early years of the twentieth century, the phonic method as an approach to learning to read was widely used in the school systems. By the 1930's the pendulum swung to the opposite extreme, and educators strongly opposed using the phonic method. The articles in Part III may help the teacher find the proper place for phonics in the reading program.

Word recognition and vocabulary building are basic elements in the reading process. Investigations in the size of vocabularies and some fundamental principles of vocabulary building appear in Part IV. Trite but true is the statement that "building an adequate vocabulary is a lifelong task."

No problem related to improvement of reading ability has been the subject of more study and investigation than that of the emotional factors in reading. Psychologists, psychiatrists, and psychometricians have conducted extended and, in many cases, thorough studies in this area. Identification of many of the emotional problems and probable solutions to some of them are included in Part V.

Extensive experimentation and research have resulted in a clearer understanding of the value of audio-visual materials in obtaining improvement in reading.

Progress has also been made in determining the relationship of listening to effective reading. Part IV draws together ten publications concerned with various kinds of audio-visual aids used in the improvement of reading.

The editor is deeply indebted to publishers and authors who have generously granted permission to reprint materials. He owes particular gratitude to William Eller, Elsie Dotson, Lydia A. Duggins, Sister Agnes Indres, and Joseph Fisher for papers which hitherto have not been published; to his wife for help in evaluating and editing the articles; and to Bobby Sellers for his assistance in the preparation of materials. Whatever value this volume may have is due in very large part to the scholarship of the authors whose writings are reprinted here.

Oscar S. Causey

January, 1958

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I

The Nature of the Reading Process

THE NATURE OF THE READING PROCESS

The definitive approach to understanding the total reading process leads to a search for all possible meanings of the word "read" or "reading." A teacher considers reading as a means of getting ideas from the printed page. A student may believe that reading is thinking. The psychologist calls reading a mental process; a psychiatrist may interpret it in terms of emotional experiences. Martin Luther considered reading a means of extending religion. An advertising man thinks of reading as a means of increasing sales. The astronomer reads the stars. The meteorologist reads a barometer. A doctor reads an encephalograph; a nurse reads a thermometer. A driver reads the speedometer. The fortune teller reads the palm or a crystal ball. The communist thinks of reading as a means of winning fellow travelers. Occasionally persons read a billboard or sign which has not a line of print. A good reader thinks of reading as fun, while the poor reader considers it hard work.

The definitive approach to an understanding of the reading process is not adequate. More than semantic analysis is required. Many human factors are involved. Physical, physiological, psychological, and even sociological factors are recognized as elements with important relationship to effectiveness of reading.

Physical and physiological activities accompany the act of reading. The eyes, ears, vocal cords, and the brain are brought into action. Reading may change a person's blood pressure. The lacrimal glands sometimes become active. Ideas received from the printed page may cause the activity of the ductless glands to increase or decrease. The electroencephalograph reveals changes in the brain activity. Hoarseness is caused in some persons during a period of intensive silent reading because of persistent and continuous functioning of the vocal cords similar to that in oral reading. Rate of breathing is often changed by the vicarious experiences accompanying the reading of material that expresses strong emotions. Lip movements tend to keep the reading rate low. Development of reading ability may be retarded, or in some cases prevented, by physical deficiencies or malfunctioning of the physiological processes.

Successful reading requires efficient vision. Some of the ocular handicaps are myopia, astigmatism, strabismus, hypermetropia, heterophoria, esophoria, and aniseikonia. Auditory acuity, like visual acuity, is essential for success in learning to read.

Fatigue, convalescence, eye dominance, hand dominance are physical or physiological conditions that affect development of reading ability. The retardation in reading due to malnutrition has been clearly shown in a number of carefully reported experiments.

The psychology of reading is not fully understood. Research continues to bring additional information. The following are rather generally accepted as elements

that are operative at some time in the reading act: visual-mental perception, attention, thinking, analyzing, evaluation, reasoning, problem solving, judging, feeling, and imagining. Attitudes and emotions are significant factors.

Visual-mental perception is the primary psychological factor in reading. Evidence is fairly conclusive that the Gestalt principle of perception operates dominantly in visual-mental perception with mature readers, while children in the lower school grades need to have the visual-mental perception supplemented with auditory or phonic learning. Perception is improvable in both young and mature persons in three specific respects: accuracy, quickness, and span of words. This improvement may be realized by reading timed exercises or selections with intention to read them more accurately, faster, and in larger thought units. Attempting to reduce the reading time and checking for accuracy apparently provide the motivation and attention required for more effective perception. The acquirement of these two skills leads to reading in larger thought units and hence to better and faster comprehension.

Reading is much more than perception. It requires two-way mental action. It is a process of getting meaning from print by putting meaning into print. In order to be able to do useful reading, one must have ideas to take to the printed page so that correct ideas may come from the page. Johnny in the elementary school reads, "An aardvark is a quadruped." The imagery brought to the pupil, if any, would be difficult to guess, even after he learned to recognize and pronounce "aardvark" and "quadruped." Certainly there would be no radar-like bounce back of meaning. After visual and auditory perception have been established for the two words, some meaning would take form, though probably inaccurate, if he were asked to read: "An aardvark is an animal about five feet long. Animals that have four feet are called quadrupeds." In this instance he took information he possessed to the printed page and brought back additional information. Relating new to previous information is requisite for effective reading. Perception is followed by apperception. One brings his previous knowledge, opinions and experiences into a relationship with present reading and compares these with what is being observed momentarily on the printed page.

Growth in reading is stimulated when a success pattern is established. Reading needs to be a satisfying experience so that a favorable emotional tone will accompany the act and in turn stimulate further growth.

What Is Reading?*

Ralph C. Staiger

Reading means different things to different people. Missionary Frank Laubach has told of the reverential awe in which primitive people hold the ability to read; how different are the attitudes of the tired businessman who peruses his evening paper, the student who is reading against time for a "book report," or the professional actor reading Dickens' *Christmas Carol*.

Reading means different things to the same person at different times. Our same student reading a letter from his girl friend views the process quite differently from his "book report" reading, just as the businessman reads a large order for his merchandise in a different way from his daily newspaper.

It would be quite pointless to answer the question "What is reading?" by listing all the possible meanings of the word or by using dictionary definitions. Those of us who have a responsibility for teaching reading, however, must be conscious of its complexity, alert to the various uses of the word, and cognizant of the dangers of misinterpreting the meaning of reading.

The shallow definition of reading in a recent book attacking modern teaching methods was one of the disturbing features of the book. Although the modern concept of reading is quite different and more comprehensive than is this best-selling author's, the book-buying public apparently was not

disturbed by the discrepancy, for the book was high on the list of popular books for many months. Perhaps the reason for the public's being misled was the fact that many persons who have given little thought to reading have the same belief: that the pronunciation of words is complete evidence of reading. It appears logical to them, is half-remembered from their own school experiences, and so is accepted as true.

Reading specialists have given much thought to the nature of reading and have evolved in the literature some fairly comprehensive statements. But reading is such a catholic tool that other specialists have analysed the process from their own points of reference. The reading specialist's orientation in general is a psychological one, or derived from the psychological discipline through schools of education. It is centered on the individual who reads. The linguist's orientation is toward the language which is being read rather than toward the individual who reads. The sociologist is interested in the effect of reading upon a culture, and so has another vantage point from which to make his analysis of reading. The man of letters is often more concerned with the material read than the reader or the reading process.

We all know the Hindu folk tale about the blind men who tried to describe an elephant. From each vantage point, the elephant appeared different. The man who held the beast's leg thought he resembled

* *Fifth Yearbook Southwest Reading Conference* (1956), pp. 5-13.

a tree; the tail reminded another of a snake, and so forth. Let us look at reading as it appears to serious students who have different frames of reference: the psychologist-teacher, the linguist, the sociologist, and the man of letters.

In general, the reading specialist has a complex stimulus-response concept of reading. The response depends upon the interaction of the stimulus and the reader's background and experiences, and is basically a reasoning process. Edward L. Thorndike first expressed this concept in 1917, when he observed children's oral reading of paragraphs. He concluded that "understanding a paragraph is like solving a problem in mathematics. It consists in selecting the right elements of the situation and putting them together in the right relations, and also with the right amount of weight or influence or force for each. The mind is assailed, as it were, by every word in the paragraph. It must select, repress, soften, emphasize, correlate, and organize, all under the influence of the right mental set or purpose or demand."

Reading as reasoning has become widely accepted by educators since Thorndike's original observations. In its successive yearbooks on reading the National Society for the Study of Education has upheld this concept. In the Forty-eighth Yearbook on elementary school reading, this was the committee's conception of the reading process:

Reading is not a simple mechanical skill; nor is it a narrow scholastic tool. Properly cultivated, it is essentially a thoughtful process—it should be developed as a complex organization of patterns of higher mental processes. It can and should embrace all types of thinking, evaluating, judging, imagining, reasoning, and problem solving.

The semanticist emphasizes the importance of proper responses to stimuli by understanding the real significance of the words which make up the stimuli. The reader must differentiate between the ver-

bal representation of an object and the object. He must avoid confusing a symbol with the same symbol when it represents something else; he must index each symbol. The semanticist goes so far as to suggest that the confusion of symbols is responsible for many of the difficulties of mankind. Actually the semanticist's concept of reading is a stimulus-response one, with emphasis on the need for carefully evaluating the stimuli.

It cannot be assumed that the concept of reading held by specialists is that used throughout our schools, for the ideas of leaders in a field are often different from the practices of rank-and-file members. In William S. Gray's study of one hundred classrooms which he visited in 1948, he found that about 30 per cent still conformed to pre-1900 reading instruction: emphasis on the mastery of word recognition skills as evidenced in oral reading. In about 40 per cent of the classrooms, the elementary aspects of silent reading were being developed, while 20 per cent were providing guidance in reading in various content fields. This was advocated from 1910 to 1930. About 25 per cent of the classrooms conformed to the broad definition of reading instruction which had been outlined in the 1937 yearbook of the National Society for the Study of Education; only five per cent of the schools visited had attained the broad conception of reading and utilized the highly functional type of teaching which the leaders in the field had advocated in the N.S.S.E.'s 1948 Yearbook.

If the definition of reading specialists is at variance with actual practice in schools, we can blame the difference on the lag between a statement of improved teaching methods and acceptance of that practice. We know enough to do a far better job of teaching reading than is being done in our schools. It is necessary that administrators, parents, and individual teachers do everything they can to take up the lag between the reading specialist's

concept of reading and current practice in more than 5 per cent of the schools.

While the teacher-psychologist's frame of reference is basically what reading does to the individual, the linguist is more interested in the characteristics of the language being read. Language, to the linguist, is the systematized set of *vocal* habits by which the members of a human society interact. It is basically vocal, and so the linguist who studies it is interested in determining and describing the oral language "code" of a group of people. When he considers reading, he views it as the written representation of speech.

The linguist views the meaning of a word as a learned response to a vocal utterance. James P. Soffietti contrasts the two positions we have discussed with this sentence: "While the reading specialist is inclined to say that the printed word merely acts as the trigger that releases a meaning we already possess, the linguist believes that the printed word acts as the trigger that releases its oral counterpart, which, in turn, releases a meaning we already possess."

Soffietti says further that the vocalization or subvocalization which preceded or accompanied writing is reproduced in the reading process so far as the reader needs to come to a meaningful conclusion. Thus speech cannot be bypassed, since it is an integral part of the learning, thinking, and conceptualization process.

Somewhat earlier Leonard Bloomfield expressed some of these ideas and offered as a solution to the difficulties of learning to read in English a general plan based on the development of reading skills according to complexity of the sound system. Soffietti agrees in the main with this plan. The acquisition of what he called "the alphabetic habit" is the first phase. This is essentially a matter of associating common sounds with letters. Gradually, more complex and irregular words are to be introduced. They are introduced as wholes, for this is not a synthetic or analytic system of

"phonics," which Bloomfield deplored as "a confused and vague appreciation" of the fact that letters and sounds are related.

It can be seen that the linguist is primarily concerned with the relationship between the sounds of language and its written form, and that Bloomfield and Soffietti relate reading directly to oral language. The highly imperfect and arbitrary English spelling system is considered merely a stumbling block which can be overcome. In more phonemically perfect languages, this stumbling block does not interfere, they say.

It appears that Soffietti has fallen into the very trap which, he says, linguists avoid. He specifies, "while the (reading) specialists are interested in the many physiological, psychological, and social *variables* that influence the child's reading readiness and ability, the scientific linguist is mainly interested in the one *constant* that is involved in the reading process, the language." The writer suggests that when the languages studied have extremely variable orthographic systems, the languages are no longer comparable from the point of view of teaching children to interpret their written forms.

While the linguist studies reading as it pertains to the sounds of language, and the psychologist-teacher concerns himself basically with the individual's complex responses to the stimuli of reading, the sociologist views reading as a form of communication whose social efforts need constantly to be reported and examined. Five major factors to which any "social effect" of reading may be attributed are discussed by Waples, Berelson, and Bradshaw in their book *What Reading Does to People*.

1. The social context, which explains the publication of some writings and the nonpublication of others.
2. The methods of distributing publications, which explain the variations between what people like to read and what they read.
3. The difference among publications themselves.

4. The predispositions of the readers, which explain why the same publication will incite one reader to action, will lead another to condemn it, and will be ignored or read with apathy by a third.
5. The reinforcing influences of other media.

The cultural heritage is to a considerable extent passed on and changed through reading, says the sociologist, although many other factors enter into the picture. The daily newspaper is characteristic of the mass media which bring news of the world and act as a medium for the interchange of ideas; for its contents can be reread, discussed, argued about. But much of what appears in newspapers is organized gossip, according to Charles H. Cooley. It is designed to occupy, without exerting, the mind, and consists mostly of personalities. It appeals to superficial emotion, and is untrustworthy, except upon a few matters important enough for the reader to follow up and verify. Reading a newspaper results not primarily in learning, but is rather a matter of being influenced. The sociologist is concerned with the reasons for this influence and the means by which society is influenced, whether the reading is done in a newspaper, periodical, book, or sign. He is interested in reading as one of the many means of social intercourse, whether it be on an individual or mass communication basis.

Men of letters, as a group, represent many different attitudes toward reading. There is no single discipline which guides their attitudes, and standardizes their ideas. This is, of course, to our advantage, for intellectual freedom has often produced the greatest literary works. But there is a great range of ability among members of the literati, and what reading means to some of the lesser lights does not concur with the ideas of the literary great.

The professional worker in literature is likely to be partial to certain emphases when dealing with reading. The inspira-

tion which he receives from reading is likely to loom large in his mind. Holbrook Jackson in *The Wonderful World of Books* expressed this attitude when he said, "Reading is an adventure, when you go with the poets into the realms of fancy and imagination; you see life with the novelist; you go down to the sea in ships and unto the ends of the earth with the great explorers; the scientist takes you into his laboratory; in biography you are let into the mystery of men's lives; the historian reconstructs the past and gives you glimpses into the future, and the philosopher gives you a glimpse of his wisdom."

John Keats expressed his poetic reaction in "On First Looking Into Chapman's Homer":

Then felt I like some watcher of the skies
When a new planet swims into his ken;
Or like stout Cortez when with eagle eyes
He stared at the Pacific . . .

Lin Yutang regards the discovery of one's favorite author as the most critical event in one's intellectual development. He considers flavor and taste as the key to all reading and says that it follows that taste is selective and individual, like the taste for food. Lin, it can be seen, believes in reading as an individual art and completely precludes the idea of reading as a duty or as an obligation.

All literati do not concur with Lin Yutang. Our heritage in print will linger and die, they say, if the great books are not read by all. Lin answers that what is one man's meat may be another's poison and cites Yuan Chunglang who suggests that you can leave the books that you don't like alone and *let other people read them*.

When the literati are scholars, the emphasis may no longer be upon inspiration. Analysis, comparison, and cataloguing became the reasons for reading. The value of such scholarly endeavors is beyond doubt, and the labors of true seekers are not questioned. But, in the hands of the lesser literati, the tools of the scholar are often badly misused.

James Thurber's English teacher, Miss Groby, is a deadly caricature of some literateurs who "never saw any famous work of literature from far enough away to know what it meant." In his "Here Lies Miss Groby" he says of her, "Night after night . . . Miss Groby set us to searching for metaphors, similes, metonymies, apostrophes, personification, and all the rest. It got so that figures of speech jumped out of the pages at you, obscuring the sense of the novel or play you were trying to read."

Although Miss Groby is drawn with a broad brush, we cannot deny that some persons are more interested in the minutiae of what is being read than whether communication is taking place. There is a need for critical reading, but Miss Groby's concept of critical reading is not as sound as Richard Altick's in his book *Preface to Critical Reading*: "When a reader finds out not only *what* is being said, but also *why* it is said, *he* is on the way to being a critical reader as well as a comprehending one."

Another direction which the man of letters may take in his consideration of reading is the aesthetic appreciation of

style and diction. Again, this personal reaction is a wonderful experience—for those who can enjoy it. Perhaps the greatest mistake which men of letters make is that of expecting everyone to derive from reading the same inspiration, the same pleasure of scholarly discovery, or the same appreciation of diction and style as they themselves do. This has been the downfall of many a student, and will doubtless continue to plague our future scientists, engineers, and other non-literati for some time to come.

What is reading? It is chameleon-like in its changes, and yet each person who thoughtfully prepares a definition has a correct one, as far as it goes. The psychologist, the linguist, the sociologist, and the man of letters all have valid reasons for their points of view. Perhaps the important thing for each of them to do is sometimes to use the other man's vantage point, in order to get a well-rounded understanding of what reading can and does mean, and so avoid the narrow interpretation which comes from being so close to the elephant that you can touch only one part of it.

2

Psychological Explanations of Reading*

George D. Spache

This presentation will be confined to a consideration of the chronological changes in our concept of the act of reading. Such topics as the physiology of reading, or the contribution of physical factors which influence readability (as illumination, length

* *Fifth Yearbook Southwest Reading Conference* (1956), pp. 14-22.

of line, the hygiene of reading etc.), will necessarily be omitted.

There has been a gradual modification of ideas regarding the nature of reading or the reading act. From the middle of the 19th century, when scientific investigation of reading really developed, until 1910 or thereabouts may be considered a period

of emphasis upon the physiology of reading. During this period reading was considered basically a perceptual act—a matter of quick recognition of words. Diagnoses of difficulties in reading took the form of examination of the physical and particularly the eye-movement characteristics of the non-learner. Handedness, eyedness, studies of the movements of the eye when reading, mirror-reading or mirror-writing tendencies, and similar physical elements were commonly investigated. Stubborn or complex cases which did not readily fit the common pattern of diagnosis were confused with aphasic conditions and labeled "word-blind" or ineducable.

Remedial work consisted largely of rote memorization supplemented at first by flashcards and crude laboratory quick-exposure devices. Mechanical developments of an eye-movement camera and improved versions of the tachistoscope permitted refined diagnosis of the eye-movements and supported remedial training intended to increase both the speed and span of word recognition. Some experimenters even modified the printed page in the hope of retaining the fixation habits of the reader by using columns of numbers, words, or phrases, or by guiding fixation points by asterisks or vertical lines running through the page. Success in reading was considered largely a reflection of physical and inherited traits which could be modified best by physical or medical means.

In the elementary classroom, teaching practices showed their dependence upon this early concept of reading. The use of an alphabetic method was succeeded by a rote word method and still later by an ultra-phonetic approach in which the pronunciation of each word was carefully denoted by diacritical marks. The almost exclusive use of oral reading, or what was really word-calling, further demonstrated the belief that reading was essentially a perceptual or word recognition task.

Some of the basic psychological facts derived from the studies of this period may be summarized as follows:

1. Reading is performed in a series of short, quick movements and fixation pauses rather than one continuous sweep across the page.
2. The number of words, phrases, or letters recognized during the fixation pause reflects the reader's familiarity with the reading matter, the difficulties which he encounters in word recognition or assimilation of ideas, as well as the physical characteristics of the material read.
3. These eye-movements do not occur line after line in a fixed pattern because of the influence of the factors mentioned above. There is, however, a tendency for the individual to form ocular-motor habits which tend to persist in many reading situations.
4. In addition to the usual forward and regressive movements, there are apparently other horizontal and vertical adjustments such as convergence of both eyes on the fixation point, irregular excursions in either direction, and slight compensatory movements. These divergent and compensatory extra eye-movements may be related to muscular imbalance and difficulties with fusion or binocular coordination. The significance of these minor movements may be judged from the fact that incoordination and fusional difficulties are considered real handicaps to effective reading in most studies of the vision of poor readers.

Although the emphasis was upon a mechanistic interpretation of reading, the research thinking of this period revealed some facts which led inevitably to a modified definition of the reading act and to changed practices in teaching the skill. It was recognized that mature reading was a relatively progressive fluent process. Eye-movements were fairly regular and consistently progressive except when interrupted by difficulties in the comprehension of an idea, epitomized in a word-symbol or

a complex phrase. Reading was not merely a series of word recognitions, since fixation points did not correspond to word wholes. In other words, the eye-movement studies showed clearly that mature reading was really an act of synthesizing ideas, not an analysis of words or letters. This process was even more obvious in silent than in oral reading.

Logically, then, instruction in reading should stress as its ultimate goal the comprehension of ideas and the growth of skill in silent reading. The primary steps would necessarily involve training in quick recognition of words. But, even at this level, recognition should probably be promoted through the use of minimal clues such as word length, or shape, or context rather than by sound or letter recognition. Thus the mechanistic analysis of the act of reading led directly to a broader interpretation of the psychological nature of reading.

Beginning approximately in the second decade of this century, the concept of reading gradually shifted to one emphasizing comprehension. A number of investigations began to stress the major significance of reasoning in reading. Various ways of learning to read, methods of teaching beginning reading, and the values of phonics were critically evaluated in numerous studies. During the period of the First World War, measures of reading achievement received a tremendous impetus. For the first time, reading tests emphasized comprehension of silent reading as much if not more than rate of reading or skill in word recognition.

Classroom practices reflected the current emphasis upon comprehension by stressing such abilities as selecting main ideas and supporting details, grasping the ideas offered by the author, and answering questions about content. A clear-cut distinction between silent and oral reading was formed with increasing use and emphasis upon the former. Different objectives were formulated for these two reading situations, and appropriate materials and teaching procedures gradually evolved.

Among the major facts established by the research of this period are the following:

1. The rate of recognition in reading begins to surpass the rate of articulation in about the fourth grade. In other words, depending upon the method employed, children are able to read more rapidly silently by the fourth grade or earlier and this type of reading should be given increased emphasis at this time.
2. There is a tendency to carry on inner speech involving movements of the lips, tongue, or larynx when reading silently.
3. These movements tend to disappear or, at least, to diminish with increasing proficiency in reading. There is some question whether these movements are essential to the reading act. Some authorities hold to the theory that recognition of meaning in reading cannot occur without some form of inner vocalization. Others believe that inner speech is an outcome of current methods of teaching reading and is a deterrent to rapid silent reading.
4. The span of perception in tachistoscopic exposure has been determined for adults as four or five unrelated words varying from 16 to 25 letters. This span is about one word larger when meaningful material is used. Wide individual differences are present which may be modified somewhat by training.
5. The number of words or letters recognized during the fixation pause has been measured by photographic studies. This span of recognition, as it is called, ranges from one to two and one half words. This span is related to the factors of intelligence, rate, comprehension, vocabulary, etc., and not to visual factors, such as limitations of peripheral vision.
6. The exact process by which words are perceived is not yet entirely clear. One point of view is that the context provides a mental set necessary for the recognition of words. Another, that the word is the unit and that its total form is the distinguishing characteristic. Still others hold that significant letters act as

cues to the word. In all probability, among mature readers all three of these aids to word recognition function simultaneously.

7. Comprehension is essentially a synthesis of the ideas presented by the words of the selection. It involves the organization and analytic treatment of ideas characteristic of thinking of the higher orders.
8. Comprehension is, in a sense, dependent upon the extent and richness of the meaning vocabulary of the reader and his reading backgrounds.
9. Vocabulary development is influenced by such major factors as capacity to learn, nature of cultural environment, reading interests, and kind of instruction received. Direct methods of promoting vocabulary growth were found superior to incidental.

These facts tended to confirm the desirability of the early emphasis upon silent reading and to induce teachers to try to combat vocalization during silent reading. They reinforced teachers in their efforts to help pupils use the maximum span of recognition of which they were capable. They promoted the teaching of multiple approaches to word recognition. Beyond these specific contributions to methodology, the research of the 20's led to the recognition that training in comprehension really involved the promotion of critical thinking—the making of judgments, the drawing of inferences, and the formulation of conclusions based upon many sources. The concept of the psychological nature of reading gradually changed from one involving mere retention or recall of facts to interpretation and evaluation of the facts as offered by the writer.

The next twenty years of research in reading, during the 1930-50 period, further broadened the new definition of the act of reading. Critical, flexible reading was emphasized during this time in the attempt to promote growth of the abilities to judge the coherence, the worth, and the effectiveness of the author's presentation. The reader was urged to apply the ideas gained

through reading to the solution of problems, and to attempt to fuse these ideas with his previous experiences. Reading was conceived of as a tool leading to new insights, clearer understandings, and improved patterns of thinking and behavior. As Arthur I. Gates phrased it, "Reading instruction is not completed until each pupil develops an interest in reading to solve problems, to secure information, for vicarious experience and for leisure activities."

A second emphasis appeared during this twenty-year period upon the necessity for differentiating reading performances according to the purpose of reading and the nature of the material. Many studies stressed the need for training in different ways of reading under different conditions. Other studies by photographic techniques and comparison of reading performances in such skills as rate, vocabulary, and comprehension confirmed the fact that mature, skillful readers differentiate their approach according to purpose, nature, and difficulty of the reading material.

A third trend in the research in this period was that toward factor analysis of the content and processes in various reading tests. Attempts were made to identify the elements of comprehension by several experimenters. Their findings were influenced, of course, by the nature of the reading tests or situations chosen for analysis, but there was considerable agreement in the various results.

During these years, we also witnessed a regression to the perceptual emphasis upon reading among many workers in the field of reading. Stimulated by the experiments in the armed services in inducing quick recognition of enemy aircraft and warships, there was a revival of efforts to promote more rapid reading by mechanical means. This led to a great deal of emphasis upon rate of reading in schools and reading clinics, despite the conflicting evidence that increased speed would most

likely result in decreased comprehension. The stress upon improvement of general rate of reading and that upon adapting rate to purpose and difficulty of the reading matter were in direct conflict with each other. These contradictory ideas have not been entirely resolved to this day, although there has been a modification of the extreme positions of both antagonists. Those emphasizing rate training have lessened their claims for this approach and tend now to stress the motivational values of mechanical devices rather than their ability to produce rapid, large, or permanent increases in speed of reading. Those formerly opposed to any devices are acknowledging the same motivational value and the possibility of rate improvement in specific types of reading situations by moderate use of such devices.

A few of the facts derived from the research studies of this twenty-year era are:

1. *Very little is known of the nature of the mental processes involved in reading for different purposes, the conditions which promote growth of these abilities, or the most effective types of instruction. Most of the training now offered in critical reading is based on logical grounds rather than established fact. It is in effect an attempt to teach individuals how to think, and we do not know exactly how to do this.*
2. *There may be a marked relationship between the reader's ability to associate words and ideas and his rate of reading. The two or three available studies do not entirely agree but result in raising the question whether all individuals are necessarily capable of improving their speed of reading.*
3. *Analysis of reading tests agree generally in finding the three factors of vocabulary or word meaning, the verbal factor or intelligence, and the reasoning factor or seeing relationships. Other elements appear to be perceptual, verbal fluency and, in one study, chart-reading.*

The more that reading instruction stressed training in how to think, the more

apparent it became that such instruction was attempting to modify the entire life of the individual. Training in how to think or read was really training in how to live. Thus the ultimate goal of reading instruction was the modification of the personal and social adjustment of the reader.

This concept that, as W. C. Olson puts it, "Reading tends to be one aspect of the growth of the child as a whole," has become the current psychological explanation of reading in the present era beginning with 1950. Success in reading is seen as markedly affected by the attitudes, feelings, prejudices, and general adjustment of the reader. Remedial work may well take the form of modifying the adjustment of the reader, with or without actual instruction in reading techniques. Therefore, remedial efforts may include or consist entirely of various types of psychological or psychiatric therapies. Thus the ultimate goal of all current reading instruction and remedial work is to aid the pupil in using reading as a tool for personal growth toward a richer, fuller life in every respect. Reading is now seen in what we believe is its proper perspective. It is not simply a process of successive word recognitions nor just comprehension of the facts. It is more than a judgmental reaction to the author's style and content. It is an integration of the concepts, and hence attitudes, derived from reading with the reader's other experiences into a philosophy and way of life.

We have tried to show that the concept of the psychological explanation of reading has shown steady progress during this century toward broader and broader interpretation. Unfortunately, practices in the classroom and clinic have not kept pace with this thinking. There are still a number of practices which refer back to earlier ideas about the nature of reading than the present "adjustment" definition. We still see oral reading in the barber-shop circle used in many schools as the only possible approach to primary reading. Progress of children is still often measured in terms of

their learning the "core" vocabulary of a single basal series as though the entire purpose of reading instruction was the memorization of a stock of such words. Devices for inducing more rapid reading, regardless of the effect upon comprehension or organization of ideas, are widely employed. Workbook materials at all levels tend to emphasize detailistic reading for main ideas, details, conclusions, etc., and apparently make the assumption that repeated reading in this atomistic fashion produces intelligent, critical comprehension. Much of the reading instruction we see in classrooms of all levels is concerned with the speed and accuracy with which

the reader handles a certain kind of reading matter, rather than with his flexibility of approach, or the intelligence he shows in adapting his reading performances to his purpose and the nature of the material. Stress is placed on speed and routine comprehension rather than intelligent integration and application of the ideas gained through reading. The lag of classroom practices behind psychological theory probably indicates that much of our efforts for the next decade or so should be placed upon improving our instructional procedures and relating these more closely to current explanations of the psychological nature of reading.

3

The Sociology of Reading*

Henry P. Smith

Psychology and sociology are closely allied fields. As they relate to the reading process, the primary difference between them is that sociology emphasizes the nature and function of human groups while psychology is most concerned with the nature and function of the human individual. Since an individual's interpretation of what he sees on the printed page is greatly influenced by the human groups and institutions with which he has been associated, reading is very much a sociological phenomenon. Thus, to a large extent a psychology of reading is also a sociology of reading.

As we study the relationships between human groups and the reading process, we

find a two-way effect. First, our interpretation of what we read, in fact our very readiness to *learn* to read, is largely a function of those human groups and institutions with which we have been associated. And of course the ideas and information that the members of a group acquire from reading influence the character of the group itself.

Reading should not be defined merely as the gaining of information from the printed page. Such a definition implies that the printed page rather than the reader is the critical determinant of what happens during the reading process. Reading is *not* a process of absorbing. Reading is our best example of a perceptual or thinking process. Reading involves not only the fluent, accurate recognition of words but also the fusion of their spe-

* *Fifth Yearbook Southwest Reading Conference* (1956), pp. 23-28.

cific meanings into our own pattern of related ideas.

Since much of what the reader takes to the printed page has been acquired from his experiences in living with others, reading at its highest level is a sociological interaction between those social groups that have contributed to the experiences of the reader and those groups that have contributed to the experiences of the writer of the printed page. What each reader gains from the printed page is determined as much by what he, himself, takes there as it is by what the writer has placed there. No two persons "read" a given selection in the same way, and the extent to which they differ in reading that selection is determined largely by the extent of differences in their prior life experiences.

Each reader takes to the printed page as a key part of his reading process his own experiences in his home, his school, his church, and his community. Thus, to the extent that the quality of his thinking and the information that he possesses have grown from the institutions and groups that have influenced him, reading is a sociological process.

The word or the sentence on the printed page does not, in itself, convey meaning to us—it merely *suggests*. The printed page stimulates us to react—to think. What meaning finally occurs depends on our own past experiences.

The problem of obtaining meaning from reading is rather cruel in its implications. The child or adult who carries most to the printed page gains most, and the one who carries least gains least. Thus the bright and the dull emerge from the reading experience further apart than they were before.

Although the sociological basis of the reading process has many ramifications, the present discussion will be concerned with but three of the important relationships between sociology and reading.

First, our ability to read and think is highly dependent upon the primary social

group from which we came. In fact, the very vocabulary with which we do our reading and thinking has numerous sociological determinants.

Second, the way we react to what we read, and even our choice of what to read, is governed in part by our attitudes, and these in turn result from the attitudes of our family, our church, our school, and our community.

Third, experiences gained from reading tend to change the nature of sociological or cultural groups.

Let's consider first some of the facts of the relationship between reading ability and the nature of the family group in which the child is reared.

There is little doubt but that intelligence is closely related to reading ability. And, as we know, there is a high relationship between the child's intelligence and the social level of his home, as well as between his intelligence and the cultural level of the racial or national sub-group to which he belongs. For example, the average I.Q. for children of professional men is about 116; for children of day-laborers, 92. The average I.Q. of the American Negro has been estimated at 85, the immigrant Mexican about the same, and the American Indian as 75 to 80.

The vocabulary with which the child reads, listens, talks, and even thinks is a product of his association with human groups and institutions. And, although differences in level of vocabulary development are implied when we speak of differences in intelligence, vocabulary has numerous dimensions beyond that of gross number of words for which a meaning is known.

Only infrequently is there a question of do we know a word or not. Ordinarily, the question is how much do we know about a word. What is the nature and breadth of our experiences with it? Take a word such as *skin*, for example. It may be used to discuss the nature of one's race or one's complexion. Or it may mean an

animal pelt or merely the process of removing the pelt from the animal. It may mean a dishonest act or the outer layer of nearly any animate or inanimate object. Similarly, a large portion of the words in our vocabulary have many possible meanings and shades of meaning. True, one way that we increase our vocabulary is by adding new words from day to day, but, equally or possibly even more important, new meanings for old words are constantly added.

Our experiences constantly add to our vocabulary in another way. A breadth of *feeling* is added to those meanings that we already have for words. Two boys may know equally well that a dog is a four-legged animal, but to one the word calls to mind a friendly puppy while the other thinks of a fierce animal that once attacked him.

We have many examples of the special meaning of words within our own professional field. Although a child might know a meaning for such words as reading, arithmetic, language, teaching, or democracy, most of us have spent hundreds of hours studying and discussing various teaching activities implied by these words.

We have, then, numerous important relationships between our ability to read and our experiences among human groups. General intelligence is very much a product of these experiences. And the breadth of meaning and the feeling that we develop for the words in our vocabulary certainly come from these same experiences with human groups and institutions. Thus both our ability to think with the printed page and the vocabulary tool with which we think are highly related to the sociological forces that we encounter.

Now let us consider how our culturally determined attitudes and beliefs influence the reading process. Certainly our attitudes and beliefs are largely a product of our past experiences with our social groups—our family and friends of our family, our church, our schools, and our communities.

Reading involves thinking and interpretation, and we often accept or reject new ideas and even new information on the bases of our emotionalized attitudes rather than on the basis of logic. When our emotional bias conflicts with our reason, too often reason loses the struggle. As we know, "a man convinced against his will is of the same opinion still." Thus our attitudes and beliefs govern both what we choose to read and what we gain from reading.

We would be paying inadequate attention to the relationships between the reading process and the forces inherent in our cultural groups if we limited our discussion to how these groups influence the reading process, because what reading does to these groups may be even more important.

Ability to read offers one the opportunity to climb from a group of lower social status to a group of higher social status. And as members of a group generally become able to read, the entire group may advance to higher social levels.

In fact, when a high percentage of the people of a nation become able to read, and when adequate reading material is available to these people, the social composition of the nation tends to change. Such a nation is no longer a collection of heterogeneous groups—it becomes a homogeneous people.

One major point of separation of the American Indian from the general culture of America has been his low educational level. As specific Indian nations have become better educated, they have tended to lose their identity as separate cultural groups, and their members have been accepted as full citizens of the general community group.

This is even more noticeable when no racial lines add to the separation. Immigrant groups tend to remain distinct cultures only so long as there are blocks in communication between them and the native group with which they have associated

themselves. Reading ability in the new language is one of their first points of entry into full membership in the native group.

We have now considered both the impact of the social group on the reading process of the individual and the impact of ability to read on the nature of the social group itself.

Certainly our need for learning to read has increased rather than diminished as we have moved from the farms to the city and as both our manufacturing and distributing of goods has been taken over by large co-operating groups rather than being done by individual craftsmen and small owner-operated stores.

Where in early colonial days religion furnished the primary motive for reading, modern society presents a variety of demands for reading. Even relatively unskilled workers are required to read directions for doing certain jobs, for meeting union obligations, and filling out tax returns. With the decrease in the length of the working week from sixty or seventy hours to forty hours or less, a workman now has time to read and he may use his reading time either for enjoyment or for preparing himself for a better job.

Actually, there are many possible topics that could have been considered in a paper dealing with the sociology of reading. I have discussed only those that seem to have the most direct bearing on the task of the teacher.

Such questions as the amount and kinds of reading done by persons of different

levels of educational attainment or in different portions of our country and the specific purpose for which material is written are legitimate parts of this field of knowledge. The sociologist is concerned also with such problems as the difficulty of various kinds of printed material and the purpose of printed material in the education or propagandization of certain segments of our people.

Does the sociology of reading have implications concerning teaching methods?

For one thing, it is obvious that good reading ability can be developed only from years of effective learning. There is no magic way to a tremendous improvement in reading ability. One surely cannot improve greatly the important determinants of reading ability by learning to make his eyes jump faster. Although they have their place, programs designed for building a high rate of speed actually are concerned with five per cent or less of what we mean by effective reading. The improvement of reading as a thinking process must involve an improvement of the stuff with which thinking is done. Thinking is done with words and their understandings and not with the eyes or ears. It is done with the ideas that are taken to the printed page. Improved ability to read comes from improved background, broadened vocabulary, and an attitude of seeking truth. And improved background, vocabulary, and attitudes come from good teaching and from broad experience in the home, the church, the school, and the community in general.

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Reading and Semantics*

William Eller

GENERAL NEED FOR SEMANTIC UNDERSTANDING IN READING COMPREHENSION

The objectives of the long-range reading program in grades one to sixteen can be rather crudely summarized into the following three goals:

1. The teaching of the mechanics of reading—word recognition, word attack, study skills, efficient eye-movements, etc.
2. The development of maximum comprehension in terms of each student's ability and experience, and including critical analysis of reading matter.
3. The development of genuine interest in reading for a variety of purposes.

During the year 1955, most of the words written and spoken on the general subject of reading instruction were concerned with the first of these three goals. Consideration of the mechanics of reading probably dominates the literature even in a normal year, but in 1955, Rudolph Flesch's book *Why Johnny Can't Read* resulted in unusual emphasis on mechanics and corresponding neglect of the aspects of comprehension and interest. In spite of this emphasis in the popular and professional literature, reading teachers know that developing comprehension is at least as important as teaching mechanics, and anyone who has given even cursory attention to the nature of the reading process real-

izes that without "comprehension"—however it may be defined—no reading has really occurred.

Since reading comprehension is not an all-or-none proposition, the educational system must strive to develop comprehension to the highest possible degree for each student. The development of the finer components of reading comprehension very definitely requires a command of the fundamentals of semantics, although the word "semantics" may not be used by either the teacher or the students.

Because semanticists have applied their art and/or science to a great variety of subjects, it may be desirable to establish a definition of semantics before further consideration of the relationship with reading. S. I. Hayakawa is one of the pioneer semanticists in the United States, so one of his definitions should be useful. In *Etc., A Review of General Semantics* he has stated: "By semantics, we mean the interpretive habits that people have within them by means of which they apprehend and react to the signs and symbols of the world around them." Over-simplifying slightly, we might say that semantics is the study of the interactions between language and personality. To the teacher of reading comprehension, semantics seems to be some mixture of communications and the psychology of adjustment.

The previously mentioned book *Why Johnny Can't Read* illustrates, in both specific and general ways, the importance of

* *Fifth Yearbook Southwest Reading Conference* (1956), pp. 52-58.

semantic skill to reading comprehension. Specifically, when Dr. Flesch refers to "phonics" in primary reading instruction, he intends a very limited, archaic concept of phonics; furthermore, only those methodologists who employ out-of-date phonics systems similar to his own are really teaching phonics, according to Flesch. Thus, elementary teachers who perceive the twentieth-century meaning of the word "phonics" are bitterly resentful of Flesch's assertion that today's schools are not teaching any phonics. A semantic impasse has resulted from the author's use of a nineteenth-century meaning for a word to which the readers apply a modern interpretation.

Flesch's recent book also requires a *general* awareness of the fundamentals of semantics if it is to be read intelligently, because the author writes in a very unscientific style and uses a number of the techniques of propaganda. Some of these propaganda tools which would be detected by the student of semantics are: (1) misrepresentation of sources by quotation out of context, (2) implication that the author is the only one whose judgment can be trusted, (3) implication that those who are in opposition have dishonorable motives, (4) use of the "straw man" technique—assumptions which are not true—followed by the proposed remedies for these erroneous assumptions, (5) deduction which is not supported by the premises, (6) misinterpretation of research, and (7) insinuation.

The writings and speeches of Senator Joseph R. McCarthy provide similar illustrations of the need for semantic sophistication in reading comprehension, and they have reached a much larger audience. The specific semantic problem is illustrated in McCarthy's case by his distorted use of the term "communist sympathizer" to include nearly all persons who oppose him for any reason. In a more general sense, his book *McCarthyism, the Fight for America* could almost serve as textual material in the

teaching of critical reading since it includes samples of all the propaganda techniques mentioned in the preceding paragraph about Dr. Flesch.

Perhaps the most obvious and frequent need for a semantic awareness on the part of the reader is associated with the reading of advertising, especially now that we are living in what has been called the "Era of Public Relations." Professor H. R. Huse of the University of North Carolina has stated this in a left-handed way: "No literature is tested as rigorously as advertising. To be successful, advertising copy must reflect accurately the critical sense or gullibility of those to whom it is addressed. To say that these advertisements display hypocrisy, lying, insincerity, and stupidity is to say only what every one with critical sense or a faint notion of honesty and candor already knows. After a look at the ads in some of the popular women's magazines, one can question seriously whether it is worth while to teach women how to read. The same can be said of some magazines for men. Our schools turn out their products equipped with a deceptive literacy like lambs ready for the slaughter."

Advertising copy-writers are not the only propagandists who are sensitive to the public's general lack of semantic judgment. Consider the following paragraphs by one of this century's masters of persuasion:

One can divide the readers as a whole into three groups: First, those who believe everything they read; secondly, those who no longer believe anything; thirdly, those who critically examine what they have read and judge accordingly.

The first group is numerically by far the greatest. It consists of the great masses of the people and therefore represents the mentally simple part of the nation . . . To it belong all those to whom independent thinking is neither inborn nor instilled by education, and who, partly through inability and partly through incompetence, believe everything that is put before them printed in black on white . . .

SEMANTIC EQUIPMENT NEEDED FOR MAXIMUM COMPREHENSION IN READING

A. An awareness that a given set of words or phrases does not have a single, rigid meaning, but that it means different things to different people. The college student has probably been taught that reading is "getting meaning from the printed page." If he believes that teaching, he is satisfied that a printed phrase has a very exact, inflexible meaning, and that all people who really understand it will get exactly the same meaning from it. It is necessary to replace this notion with the realization that, in the reading act, most of the meaning is within the reader and that without his experience background, the printed phrase would have no meaning, even if he could somehow pronounce the words. The point can be made rather obvious to a group of students if they are asked to describe the mental pictures provoked by a phrase such as "a hard-fought ball game." As one student after another tells of his imagery, the class will be amused to find that different "readers" visualized different kinds of ball games. Training along this line makes the student realize further that there is less than perfect communication between the author and the reader; thus the importance of semantic alertness is emphasized.

B. An awareness that authors write for a variety of purposes. Some students have simply never bothered to ask themselves—or anyone else—why a book or an article was written. This lack of intellectual suspicion probably stems from the unquestioning respect accorded to books during grades one to twelve. Whatever the source, the student who becomes a discerning reader is going to learn to ask whether the author wrote for pleasure, for the money, to propagandise, or for a combination of reasons. The instruction can take the direction of some of the exercises in the Stroud-Ammons-Bamman manual *Improving Reading Ability*, exercises which ask "Who Would Have You Believe This?",

"To Which of Your Needs is This Appeal Made?", and "What is the Author's Purpose?"

C. Knowledge of the propaganda techniques; also understanding of some of the antidotes for biased writing. Instruction in the rudiments of logic will help students crack the spell of propaganda, as will almost any approach to the scientific method. They should also become sensitive to the uses of emotive and informative language and particularly to the abuses of the former. College students should realize that human opinions on most subjects do not fall into two distinct categories but into continua, ranging from progressive to reactionary or from liberal to conservative. It is, of course, necessary to provide exercises which require the students to detect faulty logic, emotive language, and artificial dichotomization.

D. Understanding of the characteristics of the reader himself which make him a victim of his own prejudicial experience. This fourth essential is the least likely to be adequately developed, partly because the great majority of reading teachers at all levels do not appreciate its importance, and because it would take a considerable amount of training and guidance before the average college student could understand, to a useful degree, the nature and sources of his own interpretative biases. This understanding requires a lot more knowledge of the dynamics of personality than most people ever possess. However Ralph H. Ojemann's experiments in teaching personality adjustment to students in the seventh and twelfth grades suggest—but do not prove—that a few hours of instruction would enable the typical college student to detect and understand some of his biases, and to read with less prejudice in the future.

It would obviously take a generous allowance of instructional time to equip students with this semantic machinery, even if steps A through D were developed

as the favored method of comprehensive communication and reading comprehension increases. Auditory presentation limits itself to familiar material, serial, if possible, in nature. Auditory memory for strange and meaningless material is markedly inferior.

The cultural level of a population also reflects in the medium best suited to learning. One study suggests that the higher the cultural level, the greater the capacity to profit from auditory presentation. There is, however, a point reached where the difficulty of the material outweighs the cultural factor, and the advantage of auditory presentation is lost in favor of the visual. Another study suggests that the lower the cultural level of a people, the more likely they are to prefer listening to reading. However, this study also suggests that the more reading ability present, the more reading becomes the preferred mode of learning.

Interest in a given subject is also an important factor when considering the best method of communicating ideas. According to one study, the more interest one has in a subject, the more he tends to prefer that medium which lends the fuller treatment. Another study suggests that whatever is human, personal, or intimate seems to be favored by auditory comprehension. On the other hand, of course, materials which call for close discrimination and critical judgment are best facilitated by reading.

As we have previously indicated, many of the studies in this area have given equivocal results. The relationships between reading and listening skills are high, but by no means perfect. This certainly suggests that within most individuals a real difference between reading and listening skills does exist. Yet the question raised in many of the studies is: What is the real basis of language communication? The answer is relatively conclusive: Reading, verbal expression, and listening are a part of the central thought processes of

language symbolization. Thus, comprehension, being largely a centrally-determined function, operates independently of the mode of presentation of the material.

This would suggest that if the various psychological and physiological factors and the factors of training and use could be kept constant, then a more nearly perfect correlation would result from a measurement of the two. Both George Spache and Harry Goldstein are in effect suggesting this when they consider that listening ability may suggest a level of educability or ability to progress in reading; that is, if a student is able to comprehend well above his present reading level, there is good reason to suspect that he can be taught to read up to this level of auditory comprehension.

George Spache and James I. Brown have both done intensive work in an attempt to construct instruments for the measurement of listening. Tests were constructed by Brown to measure the ability of the listener to synthesize the component parts of a speech to discover the central idea or ideas, to distinguish between relevant and irrelevant material, to make logical inferences, to make use of contextual clues, and to follow a fairly complex thought unit. The Auditory Comprehension Reading Test of the Diagnostic Test Battery, which has been the work of Spache and the Committee on Diagnostic Reading Tests, attempts to measure auditory comprehension of main ideas, details, and inferences.

There are several factors which are difficult to control when listening comprehension is involved. For example, it is most difficult to eliminate peripheral distractions in the administration of the test. Voice, the speaker's mannerisms, and other overtones are variables which can affect the validity of the administration. The interplay between the personality of the speaker and the listener is a factor also which may be important in a given instance, yet very difficult to discover.

Rate of delivery is also an important variable. As rate of speaking goes above a certain optimum level relative to other variables such as intelligence level, comprehension falls. Just what the best optimum of rate is, considering other variables present in the testing situation, is still open to study.

Even when a recording is used, there is still some personality present in the form of the sex of the speaker, voice quality, and the like. Actually, of course, it must be remembered too, that the recording introduces a highly artificial situation which may not be received by the listener as would auditory communication in face-to-face contact. Thus, while a recording eliminates certain distracting variables, it certainly creates others. This point should be considered by those working in the field.

At the University of Florida Reading Laboratory and Clinic an attempt has been made to control some of these factors in the recording of the Auditory Section of the Diagnostic Reading Test. A tape recording was made which runs at a set rate of 150 words a minute. In order to modify some of the personality factors present in a given voice, two alternating voices are used, a male's and a female's. One voice reads a short selection and the comprehension questions, then the voice of the other sex continues the reading of the next paragraph.

Very little appears in the literature on the relationship of personality factors and listening ability. In reading, for example, there have been many studies related to the interrelation of reading difficulties and personality commitants. The field is certainly open for the same general type of investigation in listening ability.

The Reading Laboratory and Clinic of the University of Florida has been experimenting with the Auditory Section of the Diagnostic Reading Test in a rather novel way. There are several blind stu-

dents at the University of Florida. The Reading Clinic has been administering the Auditory Comprehension Test to these students and scoring the test according to the presently available norms. From the results of these findings, a series of appointments are made with the student and his or her reader. The reader is trained at the Clinic in the use of various reading techniques such as scanning, skimming, reading for main ideas, and the like, in order that he may have some concept of the varying methods of approaching written materials, some ideas concerning different ways of reading, and reading for different purposes. Joint sessions are also held between the reader, the blind student, and the clinician in order to make these new learnings by the reader become of functional benefit in the reader-listener situation. To date, we have been very pleased with the subjective results we have gained from the use of the Auditory Test. Further study in this practical problem could be most rewarding to the researcher.

Such a paper would not be complete without an indication as to whether these skills discussed can be taught. Obviously, we know that the skills of reading can be. There is considerable evidence also that listening as a learning medium can be taught. The results of our small pilot study with the blind is a case in point. Other studies which have attempted to show improvement from listening training have met with positive results. The following factors have been suggested as effective in listening:

1. Adequate hearing acuity.
2. Recognition of problems and obstacles such as prejudices or boredom, which must be overcome in order to listen effectively.
3. Adaptation to the specific kinds of listening situations.
4. Relationship between auditory vocabulary and visual vocabulary.
5. Ability to judge what is heard, or ability to listen critically.

6. Recognition that communication is a responsibility shared by both speaker and listener.

Perhaps these, too, are included in the thought that listening, like reading, is a part of the central processes of concentration, comprehension, and thinking in general. If this reasonable assumption is true, then stress should be placed on the semantic, syntactic, and the pragmatic use of language rather than on peripheral aspects in the form of drills in the formal aspects of written and spoken language.

In this overview of the relationship of reading to listening, it was concluded that a relatively high correlation does exist between these two media of communication. However, the fact that these correlation values are far from a perfect relationship leaves the question still open as to what are factors which differentiate between the two. Insensitivity of the measuring instruments, various distortion factors present in the administration techniques, factors of training and use favoring one or the other medium certainly are, in part, relevant.

Studies were also reviewed in an attempt to discover any trend which would indicate one medium of language as more effective for comprehension than the other. It may be generally summarized that for students at the intermediate grade level and below, listening is the most effective

medium. Above this level, although various studies show that reading is the more effective medium, the results from study to study are equivocal. Extraneous factors such as the difficulty level of the material, the rate of its presentation, and the cultural and intellectual level of the student have an important part in selecting the more effective medium of communication. Thus, the conclusion can generally be drawn that effective training in either medium must consider the individual as he is. Secondly, training must consider the thought processes which are necessary for comprehension and attempt to instruct in ways of improving these, rather than dealing exclusively with the peripheral and mechanistic aspects of the media. Such attention to thought processes should certainly include work in the pragmatic use of language and thinking in general.

In the area of measurement there is still room for the researcher, especially in the measurement of listening comprehension. There is need for continued refinement of such instruments and further study in ways and means to control the many distorting variables in administration.

Very little real research has been done on equating listening performances with the personality structure of the listener. The field of research is particularly open for study at this point.

Problems in the Development of Concepts Through Reading*

Richard L. Carner

William D. Sheldon

A primary goal of education is the development of functional concepts as a basis for critical thinking. Reading is one of the most important mediums through which these concepts are developed and expanded.

Although the term may be defined in many ways, there is general agreement that a "concept" is a construct which is the result of experience, may be fixed by a word or an idea, and has a functional value to the individual in his thinking or behavior.

TYPES OF CONCEPTS

William S. Gray has stated that the source of difficulty in forming concepts through reading lies basically in the nature of the concepts themselves, the way in which they are expressed, and the inherent limitations of the reader.

Since concepts can be concerned with an infinite number of ideas, or variations of these ideas, it would be an impossible task to enumerate them all. However, many of the basic concepts to be found in reading materials on all levels of difficulty concern the following types of ideas.

1. Concrete concepts (objects and processes). Such concepts are the most basic and probably the first to be acquired

if concepts are to be considered as developing along a continuum from the concrete to more and more abstract realms. Concrete concepts are primarily concerned with objects and their function: for example, a glass is an object; its function is to hold water. Since concepts of this kind are subject to direct experience, they are probably the easiest to acquire.

2. Chronological concepts (hours, seasons, historic events). These concepts are more abstract by nature and are concerned with ideas that are increasingly more difficult to relate to direct experience. Chronological time, such as that found in history, is perhaps one of the most difficult time concepts which children face because they lack experience which would make it comprehensible. Hours and seasons are more easily understood because they are experienced by the individual. Other time concepts may involve such things as light-years (space and time relations) or a sequence of events which may operate in any segment of time, past, present, or future.

3. Spatial concepts (geographical and spatial organization). These concepts are concerned with ideas which may contain multidimensional characteristics. The comprehension of latitude and longitude and their functional use in reading a map

* *Elementary School Journal*, LV (December, 1954), 226-29.

would be an example of such a concept. Spatial concepts may be concerned with geographical location as well as geometric shape. Thus acquiring the concept of a sphere is basic to understanding a geographical globe or comprehending the phenomenon of day and night.

4. Numerical concepts (basic number facts and processes). To a certain degree these concepts are subject to direct experience. The simpler addition or multiplication facts are open to self-evident proof. The knowledge of these basic number facts allows the individual to solve problems which are concerned with quantity. Thus, in a functional situation, such as purchasing goods at a store, the knowledge of addition or multiplication may be used to determine the cost. Numerical concepts, however, rapidly become more abstract and the language becomes more symbolic as the number of unknowns increases and the process becomes more complex.

5. Social concepts (understanding, attitude, and adjustment to the environment). Examples of such concepts are "cooperation," "patriotism," "government," and "justice." A concept such as "cooperation," like many of the other social concepts, may be understood on a concrete level, such as a specific situation where a certain type of behavior is desirable, or it may be generalized. A concept such as "justice," with all its ramifications, would be an example of a high degree of abstractness.

The effectiveness of learning through reading is based largely upon the extent to which relations in or among these types of concepts are grasped and utilized.

PROBLEMS RELATED TO READING MATERIALS

Many textbooks contain inherently difficult concepts. To expect the child to understand these concepts is often highly unrealistic in the light of the child's capacity for comprehension. Frequently the

verbal tools with which the child can work are inadequate for forming many concepts. Vocabulary, sentence structure, ambiguity, and concept burden combine to inhibit learning through reading. Mary C. Serra points out that reading is mainly concerned with verbalized concepts and that the printed statement of a concept is only one of an unlimited number of possible expressions. The failure to acquire concepts through reading is often a reflection of the author's failure to provide the kind of written expression which eases the reader over difficult spots.

Studies have revealed that basal readers as well as reading materials in the areas of geography, history, science, and social studies contain an excessive concept burden. The social studies, in particular, appear to contain an abundance of terms which serve to hinder comprehension. Ernest Horn found that numerical concepts, such as "many," "few," "average," and the like, are often so contextually difficult that children cannot give a verbal interpretation to them. E. B. Wesley indicates that attempts to develop place or spatial concepts such as those which involve sphericity, latitude, and longitude are not likely to meet with reasonable success before Grades VI or VII. Some studies show that the teaching of history is also impractical before this level, since most children younger than this age group are unable to form the necessary time concepts.

It is quite probable that the excessive concept loads to be found in reading materials, particularly in the social studies, encourage verbalism rather than genuine understanding. Frequently, more attention is paid to the word count, as being the most important criterion for producing reading materials, than to the density of meaning inherent in the words themselves. Thus the mere numbers of words may have a relatively small bearing upon the difficulty a child will experience in his reading. Edward Dolch points out that

word counts are misleading as to the actual meaning vocabulary of children.

Some of the available literature indicates possible approaches which may be used to mitigate the difficulty inherent in acquiring concepts through reading. Rudolph Flesch states that the addition of the concrete to written materials makes communication more effective. Mary C. Wilson found that the development of concepts was aided by expanding the written materials in order to provide a further elaboration upon the ideas which were involved.

OTHER FACTORS

In establishing sound criteria for the creation of more realistic reading materials, consideration must be given to the way in which concepts seem to develop. Bernice M. Wenzel and Christine Flurry conducted an experiment which showed that the development of concepts seemed to proceed from concrete objects to spatial forms and then to numerical concepts. Jean Piaget indicated that young children could not assume in imagination the vantage point of other persons and that there is, in the thought-process, a persistent reliance upon nonrational devices. Karl Schuessler and Anselm Strauss found that concept formation becomes gradually more elaborate, systematic, complex, flexible, and nonegocentric. Also affecting concept development are such factors as chronological age and intelligence, efficiency of verbal tools, and experience.

IMPLICATIONS

Many factors must be taken into consideration in the development of reading materials, on all levels, which will be productive of useful concepts and not verbalism alone. While much research has been done in this area, there is a vital need for more definite information concerning (a) the ages or grade levels at which the various types of concepts can be reasonably developed through reading, (b) valid criteria for the creation of more realistic reading materials, (c) the amount and kind of transfer which can be made from reading to application of concepts at all levels, (d) the role of direct and vicarious experience in developing concepts through reading, and (e) the amount and types of instruction which best promote the attainment of concepts.

Studies which would aid in the understanding of these factors may follow either the horizontal or the vertical pattern. Vertical studies could indicate many developmental aspects concerning the attainment of concepts through reading. Horizontal studies involving various instructional approaches to the acquisition of different kinds of concepts would also yield valuable information. Reports of studies based on sound experimental designs not only would enrich the literature in the field of concept development but would also have an immediate functional value in improving both instructional procedures and reading materials.

Fundamentals of Critical Reading

William Eller

Early in his career Mark Twain discovered that the typical American is not at all inclined toward critical examination of his reading fare, and the great humorist learned this lesson "the hard way." At the time, he was a brand new local editor of the *Territorial Enterprise* in Virginia City, Nevada. Shortly after the Civil War, the residents of the Virginia City area had developed quite an interest in a variety of petrified objects which had been found in that region; in fact, their enthusiasm amounted almost to a mania for petrification. Feeling some compulsion to become a social reformer, Mark Twain decided to awaken the citizenry from the petrification craze with an amusing satire about a petrified man whose preserved remains had allegedly been found nearby. Of course, Twain's lengthy account was entirely fictional and was loaded with exaggerations which were intended to warn the reader of its farcical nature. Its author later said that "from beginning to end the 'Petrified Man' squib was a string of roaring absurdities. . . ."

When the story of the petrified man appeared, the people of Nevada were so eager for accounts of petrification that they failed to detect or even suspect the fictitious elements of the story. As time went by, the tale was picked up and reprinted by newspapers all over this country and even in a few foreign lands. Commenting on the miscarriage of his plan, Mark Twain said, "As a satire on the petrifica-

tion mania, or anything else, my 'Petrified Man' was a disheartening failure; for everybody received him in innocent good faith, and I was stunned to see the creature I had begotten to pull down the wonder-business calmly exalted to the grand chief place in the list of the genuine marvels our Nevada has produced."

This was not the only time that Mark Twain's efforts at social satire backfired; and other writers, such as H. L. Mencken, have encountered the same unquestioning gullibility when they sought to teach their readers a lesson. These incidents show that while the average American may be a reasonably "absorbent" reader, he is certainly not disposed to evaluate what he reads.

IMPORTANCE OF CRITICAL READING

In a country governed by the popular vote, the importance of an informed electorate is rather obvious. One of the campaigns to induce interest in wider reading in this country occurred during the early 19th century, when government leaders recognized reading as the chief means of keeping the voters informed. However, the political parties of today direct their propaganda at the voter and besiege him with inaccurate information until he is in considerable danger of becoming *misinformed* through his reading instead of gaining a better perspective of issues. Considering the monopolistic trend in newspaper ownership, the superficial coverage

of events by the wire services, and the inclination of so many publications to sacrifice factual accuracy in order to tell a good story, it is downright difficult for the reader to "get the facts" at times. For the American citizen to be reasonably well-informed about social, cultural, and governmental affairs, then, he must constantly evaluate his sources of information.

A second need for critical reading skill is provided by the seductive nature of current advertising. Several social thinkers, such as the late Bernard DeVoto, have identified the present era as the "Age of Public Relations," with sales contracts being awarded, not for the best mousetrap, but for the most effective advertising. Presumably the consumer wishes to get the most for his money, but if he is to do so, he will have to be a very incisive reader, because each manufacturer of automobiles, refrigerators, or cigarettes seems ready to "prove" that his product is markedly superior to all challengers. If a slogan such as "More doctors smoke Camels than any other brand" had any appreciable effect on cigarette buying habits, the typical consumer is in desperate need of training for critical reading. One observer has pointed out that if the "doctor" argument was supposed to imply that Camels are less injurious to health than other brands, it would be equally reasonable (or unreasonable) to infer that the reduced longevity of M.D.'s constituted a negative endorsement of Camels.

A third need for critical reading ability stems from the need to be correct in the conduct of daily affairs. All sorts of erroneous information is available on a diversity of subjects ranging from better gasoline mileage to proper education of children. On the latter topic, a prime example is provided by Rudolf Flesch's book *Why Johnny Can't Read*¹ which has undoubtedly been read by a great many parents who had the best of intentions for their children's educations. Although it

contains many factual inaccuracies and some very weak logic which could be detected by an exacting reader, *Johnny* has influenced many parents to meddle with the teaching of their children, thus creating unnecessary problems for teachers and pupils.

OBSTACLES TO CRITICAL READING

There are, of course, reasons why Americans are not very critical in their assimilation of the content of books, magazines, and newspapers. Some of the apparent causes are traceable to characteristics of our educational system; others result from qualities of our society in general.

Certainly one of the great weaknesses of current and recent pedagogy has been the adherence to the traditional single-textbook approach to instruction. The single-text methodology cheats the learner in several ways, one of which is its failure to provide for critical reading. When only one book is employed in a class or subject, that book is an almost unchallengeable authority, and students come to accept the accuracy of its contents without question. Since no other sources are used, the learners have no opportunity to discover that other authors do not agree completely with their basic book. Thus, the single-textbook methodology errs both in developing too much respect for one authority, and in depriving the students of the intellectual exercise necessary to a comparison of different points of view.

Related somewhat to the single-text evil is another school-fostered obstacle to critical reading: the halo attached to the printed word. Beginning in the primary grades, pupils are told to "find out what the book says" when they raise questions. This is, of course, desirable in its main effect, but it includes a by-product of too much trust in the printed word. Elementary school children would develop less of this halo if occasionally they read something that could be disproved on the basis of their own experience. For example,

¹ Editor's note. See selection 45 in this volume.

quite a few elementary health texts caution pupils about eye-strain as a result of certain reading postures and lighting conditions. Since eye specialists generally disagree with these claims, pupils would profit from a comparison of the texts with the explanations of some local vision experts, and even some simple experimentation might be attempted.

A third failure of the schools in the development of critical reading facility rests on the avoidance of controversial subjects. The best backgrounds for teaching critical reading are provided by controversial issues such as race problems, politics, and labor-management conflicts, but a great many teachers steer away from these topics. Some teachers avoid controversy because they do not want to get involved in a turbulent classroom situation, and for such cowardly intentions there is little defense. But it is more likely that most teachers who avoid controversy do so because of the fear of community reaction. Because reactionary parents, unofficial watchdog groups, and "patriotic" organizations such as the American Legion have objected to forthright considerations of various touchy issues in the past, teachers quite naturally assume that objections would arise again if they were to deal frankly with controversial topics.

Another enemy of the critical reading habit which would seem to be a product of both the educational system and the general society is the emphasis on conformity. In fact, the trend toward conformity is an enemy of critical thinking of all sorts and constitutes an alarming symbol of intellectual lethargy, although, of course, some aspects of conformity are desirable and useful. Most adults, even those who consider themselves members of the thinking minority, are conformists in subtle, unsuspected ways. To illustrate, most parents would be disturbed if a son in college announced that he had decided to become a poet. When building a new house, even the admirer of contemporary

design may fear that the structure will be "too modern" for the neighborhood. In school, senseless conformity is nurtured when a student feels pressure to contribute to the Red Cross, even though he may have decided on some sensible basis that the Salvation Army could make better use of his contribution. The student in this situation is usually coerced with the argument that if he doesn't give to the Red Cross, the school will not achieve its goal of contributions by 100% of the enrollment. No one ever seems to wonder what is so virtuous about 100%, nor does anyone in the administration consider allowing the students to figure out which organizations they wish to support, and the possibility that a teen-ager might reasonably decide that none of the local agencies merited his contribution is too revolutionary a notion to enter most principals' minds.

A non-school factor which may stand in the way of critical reading and thought, at least in regard to some topics, is the personal adjustment of the reader. Since reading usually involves emotional response as well as intellectual assimilation, the reader's psycho-social adjustment may make it difficult or impossible for him to be objective in his evaluation of printed matter concerning certain subjects. At the present time, there are many persons in the North and in the South whose feelings about inter-racial activities are so strong, one way or another, that it is well-nigh impossible for them to appraise any new information without tremendous bias.

Readers everywhere are hampered in their evaluative reading by the mistaken stereotypes which they have accepted. In this country, a classic example is the concept of the American Indian as a strong, silent, blood-thirsty warrior. This stereotype had begun to dissolve when the use of old Western movies on television gave this picture of the Indian to the present generation of children.

Another characteristic of some readers which can reduce their critical reading effectiveness is the acceptance of authority on faith. Authority, in this case, can mean either principles or persons. Critical reading requires that the reader weigh, evaluate, and seek proof. Acceptance on faith requires no such scientific probing; in fact, it is opposed to investigation, sometimes just on the basis of method, sometimes because the object of the faith would not survive examination.

Religion, which has an element of faith, can be an impediment to critical reading and thought, but it does not have to be. For one thing, it is possible for a devotee to accept religious principles on faith even though he is very scientific in seeking the explanations to strictly material phenomena. Furthermore, the church may even support its doctrines with some sort of demonstrated proof, in which case it could be contributing to the scientific-mindedness of its disciples. However, the practice of forbidding members to read other philosophies which differ from the basic views of the church does not contribute to the critical reading attitude. This practice of "editing" the reading matter of church followers might be defended by some as good religious policy, but it is not good scientific method.

Even if none of the listed obstacles to critical reading were operative, there are two rather immediate reasons for uncritical acceptance of the printed word by some readers: (1) failure to realize that critical reading is necessary, and (2) lack of specific techniques for critical analysis. The first of these reasons implies that some people have never suspected that an author often has purposes other than presenting the unadulterated truth and collecting his royalty checks. These readers are also unaware that they have certain needs towards which propaganda can be aimed.

Even with the intention to evaluate critically, the reader must still have certain

skills. Just as advertising writers learn certain techniques which they use in writing their propaganda, the reader must master some devices for the analysis of propaganda. These approaches to propaganda analysis are frequently considered by the semanticists, and some are discussed in the article on "Reading and Semantics" in this volume.

ESSENTIALS OF CRITICAL READING

Like so many human skills, critical reading ability is not either completely lacking or perfectly present in the reader, but is present to varying degrees in different readers. Furthermore, this ability is not present in each reader to a precise degree, since it also differs as the topic changes, and no one can be a critical reader about all possible subjects. In any instance, the extent to which an individual is able to evaluate as he reads is a product of the following essentials:

1. Wide background of information
2. Intelligence, average or better
3. Personal adjustment which will permit objective consideration
4. Appropriate skills for evaluative reading

It is immediately apparent that some of these essentials can be readily affected in a school or adult education program, while others are not very amenable to instruction. Intelligence is necessary to the sort of weighing and judging which occurs in critical reading, but teachers do not expect to do much, if anything, to improve intelligence. The reader's personal adjustment is something which can be changed, but ordinary educational channels do not usually attack this facet of the learner directly, and as far as adults are concerned, many of them do not want to improve their psycho-social adjustment if that would mean changing their views about labor unions, modern education, Harry Truman, toll roads, or the present generation of adolescents.

The other two requirements for critical reading—informational background and specific evaluational skills—are the ones which will respond most noticeably to the efforts of the teacher and the learner. It may take some time to acquire a broad background of information on any given subject, but any mature reader who is willing to devote the necessary time can give himself a respectable knowledge of most subjects which are of vital concern to him. In building an informational background for critical reading, the reader actually becomes somewhat of an expert on his subject, and this is to be expected because a degree of expertness is necessary for critical evaluation. For young readers, teachers can help to develop good backgrounds for critical reading in at least some areas by encouraging wide reading on related subjects and by exploiting the pupil's interests on the one hand while extending these interests on the other.

At present, elementary and secondary teachers provide their students with some of the more mechanical tools for critical reading. The learner understands that he should check the copyright date, the author's competence, and the publisher's reputation. Moving on to a slightly higher level of critical examination, some teachers lead their students to the realization that most authors write because they wish to promote certain points of view. Students at the junior high school level can be sensitized to the intentions of authors if their reading of propagandistic material is followed by such questions as "Who would want you to believe this?", "What is the author's purpose in writing?", or "To

which of your needs is this appeal directed?"

The high-level skills of critical reading require some understanding of the propaganda-writer's technique and the semantist's antidote. These procedures have been elucidated by S. I. Hayakawa in *Language in Thought and Action* and by Richard D. Altick in *Preface to Critical Reading*. Teachers who wish to steer their pupils to more analytic reading and adults who wish to improve their own evaluative skills will find help in either or both of these books.

In recent years there has been a great deal of public interest in reading and its pedagogy. A multitude of articles has appeared in the popular magazines, but, almost without exception, they have dealt with the mechanical aspects of reading, as though a student who can pronounce the printed words is a reader even if he doesn't get the important elements of meaning. This is a very unfortunate misplacement of emphasis. In the first place, it is not extremely difficult to teach most children the mechanics of word recognition and fluent reading. A number of different teaching methods have been employed during the past century and most of them have been fairly effective. Even children who are classified as slow learners learn the mechanics of reading if given time. But a reader who has mastered the reading mechanics and who comprehends literally without attempting to evaluate the printed context is in possession of a dangerous weapon. He is just as well equipped to become misinformed through reading as to become enlightened.

Theory and Techniques of Auditory Perception as an Approach to Reading

Lydia A. Duggins

The reading skills of the young child are based upon his speech skills and should be a direct outgrowth of these skills. However, reading is an unique act and should be taught as a reading rather than speech skill. Examination of the traditional methods of teaching reading reveals that these methods are based primarily upon the vocal (speech) acts rather than upon the imagery required of reading acts. This is true of "look and say" methods and also of most of the "phonics" systems. The "say" of the reading act is not a part of the actual reading process but rather an application of it. Both the mechanics of reading a word and the application of meaning to that word precede the vocal production of it. Therefore, the vocal production of the word merely becomes the oral application of previously acquired word perception skills. Applying this principle to our present methods of teaching reading, it becomes obvious that the "sounding out" process is an unnecessary and undesirable practice to the child.

In learning to talk, the young child sees a desired object in his environment and hears someone name the object. He tries to imitate the name by selection of speech motor patterns from those he has already learned. He retains both the meaning and the sound of the object, together with a vocal pattern with which to communicate

with others. Thus, he has learned to say a word. *But he has not learned to read it.*

In reading, the child must learn to listen to print rather than to people. The book must "talk to him." Regardless of whether he is reading silently or orally, the reader must achieve a clear auditory perception of the printed symbols. In this respect auditory perception is used to signify the process of discrimination, integration, and generalization whereby the sound pattern of the visual symbol becomes a percept that achieves stability and meaningfulness in the life space of the perceiver.

Auditory perception is achieved when the experiencing individual is active, aggressive, and goal-directed. Perception implies meaning. A meaningless repetition will neither achieve perception nor will it lay the basis for achieving it. A passive exposure to an auditory stimulus may achieve nothing, or it may result in rote vocal responses. It will not enable an individual to utilize sound experiences in reading situations. Perceptions in auditory areas must be attended then by two factors: first, from his language experiences the child draws conceptual patterns composed of meanings, and, second, he develops structures within which these meanings are to be expressed.

There is reasonable evidence to support the belief that the child's vocal reproduc-

tions of sound are not necessarily synonymous with his auditory perception of that sound. If we observe the development of speech in the young child, we note that what the child says is only an approximation—at times a highly dissimilar approximation—of what he hears. The difference in the vocal reproduction of sound and the auditory perception of it is highly significant in the reading process. Observations of children in clinics have shown that it is entirely possible for a child to give vocal representations to all sounds of letters without being able to make the necessary sight-sound associations for the generalizations called for in the reading process. In the process of reading, the auditory perceptions, together with the attendant visual stimuli, become the primary basis for comprehension and retention of ideas.

An important objective of the auditory readiness program is to facilitate the linking of the child's already rich experiences with sound to reading in such a way that he becomes able to make the transition from his speech to his reading without interruption of his growing interest and skill in communication. The objective of early training in auditory perception is seen as enabling the child to hear and interpret sound patterns that are already a part of his language skills and with which he has already had considerable experience. His approach to words and word patterns should be on the basis of "hearing the words" rather than "sounding them out or saying them." He then listens to books rather than calls or sounds out words from them.

In pre-reading experiences, children should recapitulate their early language experiences except that emphasis should be upon listening activities, and vocal responses should be eliminated as much as possible. The goal is that the child be able to hear the word as a sound pattern. In attempting to say the word, the child will not be able to differentiate so keenly as is

possible if attention is directed to listening. It is felt that, in reading, clear auditory perceptions precede vocal responses and that ability to say the word indicates merely that the perception has been achieved. Memory is not, then, dependent upon the number of times the child says the word, but, rather, upon his ability to associate auditory images with the attendant meanings from his own experiences, with vision serving as the directing stimulus for the utilization of these skills. Thus, visual stimuli might be assumed to be undesirable prior to the development of these basic auditory skills and should not be included in these early experiences. The use of pictures, written or printed words, and other such materials should be delayed. Auditory orientation to reading should be established before the complex visual demands of binocular function, left-right orientation, motor coordinations, spatial relations, and near-point observations of likenesses and differences of word form. Thus, the relative maturity of auditory skills is utilized to the fullest extent possible.

To summarize, observations of children's maturational patterns, linked with a careful consideration of the role of perception in the reading process, have led to the following hypotheses: (1) that a reader in reacting to the symbols on a printed page brings his visual and auditory experiences simultaneously to the formation of a perceptual pattern; (2) that it seems maturationally sound to give precedence to the development of auditory perceptions in initial reading instruction; (3) that in the beginning stages vocalization of sound may inhibit the achievement of clear discriminations; (4) that auditory perceptions are achieved by an individual when he is active, aggressive, and goal-directed; and (5) that auditory perception involves attaching meaningfulness to sounds as well as the ability to make discriminations among sounds.

A PROGRAM FOR THE DEVELOPMENT OF AUDITORY PERCEPTIONS RELATED TO PRIMARY READING

The retention and association of auditory patterns is an essential part of the total reading process. Children need many experiences in this area prior to the introduction of printed materials. They need to enjoy these experiences as they enjoyed learning to talk. The program to be presented here is designed in such a way as to take full advantage of the language skills the child has already developed and to move him easily and naturally into the exciting world of print. Each step in this program is based upon the preceding one and should not be presented until the majority of the class has mastered the preceding step. All steps should be reviewed daily.

It is assumed that the child will be able to read the books in any selected reading series at sight when he goes to it. Therefore it is desirable that the child be so familiar with auditory perception patterns that he can give the letter symbols for the sounds in any familiar word from his speaking vocabulary before he is put into his first book. He should have achieved the following competencies:

1. Know the names of all the letters.
2. Be able to blend sounds into words when the word is sounded out to him by the teacher.
3. Be able to locate the sounds in words.
4. Be able to count the sounds in a word.
5. Be able to associate letters with the sounds they represent.
6. Be able to dictate the symbols which represent the sounds in simple spoken words.

Certain basic principles are followed in this program to insure that optimum development for each child be secured in the auditory perception area and to lay the foundation for sound reading habits from the very beginning. These principles are:

1. Visual stimuli are not introduced until the child has mastered the first four steps of the program.

2. A child is never asked to sound out a word; the teacher sounds it out for him. If he can hear it, he will read it. If he cannot hear it, his sounding it out will not help.
3. During the auditory perception training the child is not permitted to respond vocally to the presenting stimulus.
4. The teacher accepts any report from a child of the number or nature of the sounds he hears. He is the one who can tell the teacher what he hears. If he cannot hear a sound, it does not exist for him until he does hear it.

In these early experiences with auditory perception, the child forms certain basic attitudes toward reading that insure his continued growth in becoming an enthusiastic and competent reader. These attitudes are given here in order of their presentation in the program:

1. Sounds tell us many things if we listen to them.
2. You can hear sounds without their actually being present.
3. Words are made up of sounds.
4. You can hear and find the sounds in words.
5. You can count the sounds in words.
6. All letters have names and stand for the sounds you hear in words.
7. You can say things on paper with letters and other people can hear you talk.
8. Books say things to you when you listen.

SUGGESTIONS FOR TEACHING EACH STEP IN THE PROGRAM

Step One: Listening to Sounds. For developing the child's sensitivity to sound, utilize every sound experience in his environment. The playground, lunchroom, and home offer many interesting things to which a child can listen. Have him listen and report what he hears. Have the child listen to the way the characters in stories walk, talk, sing, or run. Use recordings, the voices of the children, and articles they collect at home that make interesting sounds.

Step Two: Developing Auditory Imagery. Auditory imagery is the ability on the part of the child to recall mentally the sounds he has experienced. This skill is very important to him as a reader because he will have to recall the sound of every word he reads. The teacher may take an imaginary trip with the children and have them report the sounds they hear along the way. The children may look at pictures and report the sounds they hear. They may listen to an imaginary dog and decide by the pitch of his bark if he is a large or small dog. The teacher may say to the children, "I am thinking of a word that means something you sleep in." The children will hear mentally the word that explains what is slept in.

Step Three: Blending Sounds. The purpose of this step is to enable the child to grasp the concept that words are made up of sounds. Sound out a word to the children. Do not separate consonants from the following vowel if the consonant has a long vowel in its letter name (*b, c, d, g, h, k, p, q, r, v, z*). Thus, "boat" is sounded "bo—t," "home" is sounded "ho—m" and "moon" is sounded "m—oo—n." Do not permit the children to tell the word you are sounding out. Ask questions about the word and let them answer "yes" or "no." For example: "f—i—sh." Can you eat a "f—i—sh?" Can you sleep in a "f—i—sh"? Am I saying "dog"?

Step Four: Locating Sounds in Words. Use numbers to develop an understanding of "beginning," "middle," and "end." Slowly say three numbers aloud. After you have finished, have the children tell which number is at the beginning, which in the middle, and which at the end. Substitute a letter name for one of the numbers and have the children show the position of the letter. Gradually add other sounds until the children can locate long vowel sounds in a word that is sounded out to them. Continue this practice until they can locate the sound accurately in words spoken

naturally. Finally use other sounds of vowels in this practice.

Step Five: Counting Sounds in Words. Steps Four and Five of the program are essentially visual skills although no visual stimuli are used. This is the seeing that is done with the ears and prepares the child for accurate integration of visual and auditory skills in the reading act. Start with the counting of numbers as in Step Four. Gradually add long vowels and other sounds until the child can count the sounds in a word. He should be able to count the sounds when the word is given without sounding it out before he is ready for the next step.

Step Six: Associating the Sounds of Letters With Their Names. Say the letter *b*. Have the children count the two sounds and locate the *e*. Put the letter on the board and show the children how the *e* helps the *b* to say his name. Tell them that the first sound they hear is the sound of the *b*. Let them see that in a word like "baby" the *b* talks with an *a* and that in "bike" the *b* talks with an *i*. Use other examples of combinations of *b* and long vowels. Give the children much practice in listening to words and seeing which letter "talks" with the *b*. Teach *d, i, k, p, r, v,* and *z* in the same way.

Say the word "at" for the children. Let them count the two sounds and locate the sound of the *t*. Put the word on the board and let them see that the first sound they hear is *a*. Give them much auditory practice in hearing this sound. Introduce the sounds of the *e, i, o,* and *u* in the same way. Use words such as "egg," "it," "on," and "up." Give much auditory practice in hearing these sounds both in isolation and in words. Let them locate the sound in words.

Say the letter *f* and let the children count the two sounds and locate the short *e* sound at the beginning of the letter name. Give the sound of *f* and let them see that it is the other sound they hear in the letter name. Give auditory practice

with words having an *f* followed by both long and short vowels. Let the children tell you how to write the beginnings of these words. Some of them will begin to note middle and ending sounds at this time. Encourage them. For example, a child may hear a *t* on the end of "feet." Have him show you where to write the *t*. Introduce *l, m, n, p,* and *s* in the same way.

At this point, the children have achieved enough mastery of letter symbols to be able to find the letter sounds in words and to note sound clues in letter names. The irregular letters can be taught at this time. For example, *y* has two sounds, and the first one is the sound of *w*. *W* has five sounds in its name. Let the children identify these. *H* makes a tired sound and looks like an easy chair. Have the children listen to the "ch" sound in its letter name. *X* has three sounds in its name but likes to say its name in words. *Q* says "ku" in its letter name but appears with a *u* and together they say "kw" in words. *C* and *g* have two sounds. You can hear one in their letter names; the other can be found by listening to words and locating the sounds.

Step Seven: Reading Words of More Than One Syllable. When the children are ready to read words of more than one syllable, teach them that one says a long word as though it were two or three short words. Give them much listening practice in hearing syllables. Sound the syllables of a word out to them and let them tell you the name and location of the letters. *Do not teach the children how to divide words*

into syllables. Good readers see the word as a whole and it speaks to them. A child should see the structure in the whole word. The child should be able to hear a prefix or suffix at sight. Play the game with him of making a short word long. Put "fine" on the board and let him hear it. Erase it. Tell him you are going to write it again but you will put something in front of it. Write "refine" and let him hear it. Erase it and tell him you will make it still longer by putting something on the end. Write "refinement" and let him listen to it. Let him make up nonsense words using these prefixes, suffixes, and familiar root words (i.e., "replayment"). Let the other children see if they can hear his word. Use other prefixes and suffixes in the same way.

A child learns phonetic rules when there is a reason to do so. He sees those things he has reason to see. He hears those things he has had practice in hearing. But he must be able to LOCATE the object of his perception. When he notes that the word "boat" has three sounds and four letters, he is ready to learn that the first vowel says its name and the second does not talk. When he hears the "tion" in conversation as the teacher sounds it out to him, he can note both what the suffix says and what it looks like. He has a reason to be interested. He can find the sounds to be listened to because he can find the other sounds in the word. He has security and confidence that the book will talk to him because he has located himself in the spatial relationships of sound.

Looking Ahead in Teaching Reading*

Nila Banton Smith

We are on the brink of a new epoch in reading instruction. Our imperatives are clearly outlined. We have but to observe the onrush of social forces about us, to feel the impact of the new psychologies and philosophies, to examine recent research in order to know that reading instruction must change in many ways.

In the future, reading instruction must concern itself with much more than pedagogy. It must mesh more directly into the gears of vital social problems and needs. It must make its contribution to American life and ideals. This necessity can be illustrated by a brief review of the history of reading instruction in our country.

READING IN THE PAST

During our first historical period of reading instruction, both method and materials served the religious motive, which was the all-controlling force in the out-of-school life of early Americans. During the period following the Revolutionary War, both reading methods and materials took upon themselves the obligation of building good citizens for young America.

As years passed, security for the new nation became assured. Then followed a tranquil period in which there were no urgent social problems. Education settled down to the pedagogy of reading, and reading materials were selected in terms of the particular pedagogy which was popular at the moment.

During this period of complacency, extending to the present, we have hidden our heads in the sand of pedagogy and concerned ourselves largely with such things as methods and vocabulary and readability. We have grown mightily in our knowledge of these things and are teaching reading less painfully and more effectually because of this knowledge.

But now the situation has changed. Again we find America thrust into a period of insecurity. Is it not time for us to take stock of our urgent social problems and to examine the contribution which reading instruction might make to the exigencies of American life? If the answer is "Yes," then certain musts are in order.

CARRY-OVER INTERESTS

We must strive, as we have never striven before, to develop wide, permanent, carry-over interests in reading. Social change is striding across the reading habits of America with a heavy tread. Reading is now faced with many competing agencies. Radio, television, movies, and picture magazines afford the average person about all the entertainment and information that he desires.

Rather than accept a brief summary of news items from a commentator, together with his particular interpretation, Americans need to read widely for themselves, to sift personally the wheat from the chaff, and to draw their own conclusions. All this means that we must exert ourselves as

* *National Education Association Journal* (October, 1955), 416-17.

never before in developing vigorous, permanent interests in reading.

To develop more abiding interests, instruction in reading must be made increasingly attractive to children. Teachers must put to work all their enthusiasm, energy, and ingenuity, not only in making the most of every reading situation, but also in causing every reading activity to be fascinating.

More challenging materials are needed. Children of today are sophisticated; much of the material they are supposed to read in school is below their level of intelligence and understanding. They must be surrounded with quantities of books of appropriate difficulty dealing with an almost endless variety of subjects.

The presentday child is far beyond the naïveté of the child of a generation ago. We must meet him on his own ground and in his own world if we expect to deepen and hold his interest in reading

THOUGHTFUL READING

Not only must we develop a keener interest in reading, but we must also develop the ability and desire to abstract deeper meanings from what we read. If future America is to meet its pressing problems, it must be an informed America. An informed American must understand fully what he is reading. Passive acceptance of surface meanings is not enough. We need to *think* as we read.'

All too often experiences which children receive in working with reading in the classroom are those in which not much thinking is done. It is the type in which they simply give back some statement from the text: "What was Mary playing with?" and the text says, "Mary was playing with her doll."

The teacher of today must stimulate children to react in many different ways to the meanings which reading conveys. Children must be taught to question, reason, compare, draw inferences, generalize, interject ideas of their own, seek interaction

of these ideas with others, and draw independent conclusions. Thinking in connection with reading must be cultivated vigorously so that the real significance of statements may be completely understood.

CRITICAL EVALUATION

Important as this matter of grasping deeper meanings is, we must go still further. In this age of high-pressure salesmanship and wide dispersal of propaganda, we must place much more emphasis upon *critical* reading.

Critical reading calls for additional steps in thinking. It involves getting the facts and interpreting deeper meanings, as discussed above. It also makes use of the personal judgment of the reader in deciding upon the validity of content. In critical reading, the reader evaluates and passes judgment upon the purpose, the fair-mindedness, the bias, or the truthfulness of statements made in text.

SPEED OF READING

Another must which presentday civilization exacts from us is that of developing a new streamlined type of reading ability. Adults the country over are flocking to reading laboratories to learn how to read faster. Of the basic Three Rs, reading is the only one which has failed to develop greatly in speed during the past 50 years. We have both shorthand and typewriting to speed up the writing process. We have many kinds of machines, including the electric computer, to speed our arithmetic. But we still read at the same old pace!

People everywhere complain that they do not have time to read. Lack of time is not the basic problem. It is lack of skill. They need the skill to read more in the time they have. While streamlining techniques are more appropriate at the higher levels, much could be done in the upper elementary grades to establish reading habits which will gear into the tempo of modern living. This must be done if reading is to make cultural advances commen-

surate with our technological and living-standard advances.

PART OF TOTAL GROWTH

One of the most profound truths about reading which has been discovered in recent times is that the development of this skill is a function of total growth. The maturing child grows in many ways—reading is just one of these ways. In other words, growth in reading is “part and parcel” of total child development, and as such can be evaluated only in conjunction with all the growth factors which influence achievement of this complex skill.

The era of considering reading as a mental act in itself is rapidly passing. New relationships among reading growth and other aspects of child growth are being discovered daily. Investigation has shown that there is a relationship between reading ability and physical maturation, health defects, diet, emotional disturbance, social adjustments, experiential background, and growth in the other language arts. Teachers and parents alike must become more keenly aware of the dependence of reading success upon these other factors.

PATTERNS OF GROWTH

Another important must emerges from the longitudinal studies which are being made of children's growth over a period of years. The idea of the need to recognize the *whole child*, which budded and flowered in recent years, is now being replaced by the conviction that we must recognize the *child's whole life*.

The continuity-of-growth concept is manifesting itself in instruction in several ways. Teachers are becoming more open-minded about and skilled in accepting each child at his particular level of de-

velopment and fostering his growth from that point on instead of fretting because many of their pupils are not up to their grade expectancy. Many high schools are adding courses in developmental reading in order to assure continued reading growth at the higher levels. We must continue these beginnings and expand them.

Research tells us that there are different cycles of growth in individual children. We must learn more about these cycles and respect each child's growth status at any one time in gauging the intensity of reading instruction which it is safe to provide. The long-time vision of child life and the careful study of individuals in terms of continued growth patterns will help us in removing many anxieties about those who are slow in undertaking reading and those who are not making regular year-by-year increments of reading growth.

Many other and lesser musts could be mentioned as next steps. Those discussed above, however, would seem to be imperative if the kind of reading instruction we offer is to contribute most adequately to the development of the individual as well as to the best interests of American life.

THE CHALLENGE

Reading is so fundamentally embedded in American life and American schools that mirror-like it reflects changes both in education and in social life. For this reason, reading flings out a strong challenge to all of us. It has a scope and a sequence, a breadth and depth never before envisioned. If this vision is skilfully and enthusiastically implemented, then we should have much better readers in all decades ahead—and America should profit accordingly.

II

Methods of Teaching Reading

METHODS

The need for effective methods of teaching reading is increasing with the growing demand that more emphasis be given to teaching reading at all school levels. A few decades ago, teaching reading was confined to the lower school grades. The Twenty Fourth Yearbook of the National Society for the Study of Education went so far as to advocate reading instruction in the first three grades only. Twelve years later, in the Thirty Sixth Yearbook, the same organization advocated reading instruction through each year of the common school program. In 1956 the Society devoted a whole volume to adult reading.

Today there is a growing acceptance that training in reading can be helpful at every level of instruction. Reading methods courses are offered in high schools; reading improvement courses in college curricula are quite common. A survey made in 1956 by the Southwest Reading Conference for Colleges and Adults shows that two hundred and fifty colleges have more than forty thousand students enrolled in reading improvement courses.

With the increase in the scope of reading instruction, there has been a corresponding increase of emphasis on improvement of effectiveness of methods used in instruction. Research, experimentation, and experience have pointed the way for alert reading teachers.

Learning to read is a difficult, complicated, time-consuming task calling for the development of many abilities and the mastery of a number of skills. Use of effective methods in improvement of reading ability requires an understanding of the intricacies of the reading process and knowledge of the skills that are involved in effective reading. For the purpose of bringing about continuous growth in reading ability many skills have been identified for development by the learner under the direction of the teacher.

The primary requisite in reading is word recognition. Learning to recognize words involves the development of a number of word attack skills. Use of these skills enables one to identify words by configuration, spelling a word, seeing small words within the word, recognizing prefixes and suffixes, picture clues, language-rhythm clues, tracing the word and roots, using context clues, breaking words into syllables, using phonetic analysis and letter-by-letter sounding. Other factors in the reading process that have been recommended for classification in the category of reading skills are: getting the main idea; reading for details; reading to predict outcomes; reading to understand directions; developing vocabulary; reading critically; reading in thought units; getting information; outlining and organizing what is read; increasing rate of reading; reading maps, charts and graphs; using the index; using the dictionary.

Perception, recognition, comprehension, organization, generalization, appreciation, retention, and application are some of the more complex factors in reading. Functioning of the complex skills will not occur unless the component simpler skills are working properly.

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Perception, recognition, comprehension, organization, generalization, appreciation, retention, and application are some of the more complex factors in reading. Functioning of the complex skills will not occur unless the component simpler skills are working properly.

Reading ability is improvable in spite of its complex nature, regardless of the reading maturity level of the individual. Many techniques and procedures have been developed for improvement of the more mature readers. Assuming that the individual has a desire to improve, probably the most effective single procedure is to time the reading of short selections while a strong effort is being made to improve comprehension, rate of comprehension and ability to read in thought units. This procedure calls for materials on which questions have been prepared so that comprehension can be measured, and the use of a reading score or index which is found by getting the mathematical product of the comprehension and rate scores. At grade levels above the elementary school, student self-scoring methods are very effective. Improvement of scores results. This improvement serves as motivation in further practice. This procedure in many schools has resulted in increase of comprehension and an increase of more than one hundred percent in rate of comprehension. Timing of specifically assigned exercises, after the student has accepted the task of improvement of his reading score, aids in increasing the power of attention to the immediate task in hand by enabling him to ignore such outside physical sources of interfering stimuli as noise. It also aids in the elimination or repression of inner wayward emotions that frequently interfere with the thought processes of reading.

Maximum improvement of reading ability of pupils may be expected only under the guidance of the teacher who comprehends the nature of the reading process and has a mastery of the reading skills together with thorough knowledge of the techniques, procedures, and methods for teaching others to read.

Four "Methods" of Teaching Reading*

E. W. Dolch

There are four distinct "methods" of teaching reading, which have developed in the past thirty years. Most good teachers use all of these methods at different times, combining them in their efforts to do whatever is best for the children. But few teachers have considered the various benefits to be secured from the different methods and their various drawbacks. To bring out these benefits and drawbacks, we shall discuss the four "methods" separately, finally considering how they may at times be combined.

THE ALL-ORAL METHOD

The older ones among us can well remember the time when "reading" meant oral reading to practically everyone. One reason for this may have been the influence of Mr. McGuffey, who made reading almost synonymous with elocution. His very early books discussed the rising and falling of the voice, the methods of "expression," and the like. Perhaps it was his influence which caused programs of entertainment to carry the item "Reading" when what was meant was a recitation of a poem, an oration, or an essay.

Perhaps another influence that caused the all-oral method was the fact that when one spoke of "reading something" it was supposed that he would be reading literature of some kind. There were very few magazines, and most of those purported to

be literary. One magazine, popular at that time, even tried to make itself stand out by calling itself *The World's Work*, thus claiming to be factual rather than literary. This literature, then, which engaged the attention, was to be read for all the literary qualities, and these naturally came out best in oral reading.

Finally, one wonders whether nearly everyone did not, in those days, read quite slowly, largely through lack of practice. If anyone reads slowly, he naturally thinks the sounds of the words, whether he pronounces them aloud or not. So perhaps nearly everyone was reading orally in the sense of reading sounds, rather than doing the visual reading, without thinking sounds, which many of us do today. This is only a conjecture, of course, since we have no figures on speed of reading in those times.

THE ALL-SILENT METHOD

Many of us can also remember the time when "silent reading" was "discovered." There came all at once a very avalanche of articles and books on "Silent Reading." In fact, one publisher got out a series of basic readers for schools called "The Silent Readers." Much attention was paid to "silent reading methods" and all methods involving oral reading were questioned. It now seems very strange to us teachers and "experts" that they did not all realize that through practice one could progress from reading by thinking sounds to

* *Elementary English*, XXXI (February, 1954), 72-76.

reading without sounds, thus achieving silent reading. A vast number of persons did it. Perhaps the emphasis on silent reading came largely through the use of reading tests, and the discovery that a test done silently might be done much faster than a test done orally without much study of *how* it might be done faster. At any rate, the assumption was made at that time that though children might learn to read orally, all adults read silently. Further investigation has now revealed that very many adults, though they make no sound, are still *thinking* sounds and thus doing oral reading in every real sense.

But what about silent reading as a method of learning? One of the early pioneers was Emma Watkins at the experimental school of Iowa State University. She professed to teach reading without sounds whatever. Her children seemed to demonstrate the method. She even wrote a book on the method. Of course Miss Watkins says nothing about the mental ages of the children she was trying to teach. Were they five or six or seven mentally? Nor does she say anything about what the children did in their heads or voice mechanisms as she taught. They made no outward sound, and so she said she had proved that the silent reading method worked. Few followed her example, however, perhaps more through fear of a new method than conviction that she was wrong.

In Chicago, however, we had an "all-silent" advocate who seemed to get much farther. Mr. McDade was principal of a school and tried out the idea that, since adults read silently, first grade children should. He developed what he called "non-oral" materials. The children sat most of the time in silence and matched words and pictures and so on. When they "read," they spoke only the answers. Mr. McDade used standard tests and "proved" that every one of his first graders learned to read, while in other schools there was the usual number of failures. Unfortunately, it was later

found that the words used in the particular test he used, matched the words in the materials his children had been taught. But meantime, Mr. McDade was made assistant superintendent of schools and extended his "all-silent" system to many Chicago schools. This period lasted until the retirement of the advocate of the system, and since then, most of the teachers and schools changed to other systems of teaching reading.

Of course it is assumed that every child, every day, will have much material that he can read silently with pleasure. One learns fluency only on easy material, that is, easy for the particular individual. No book provided for a group can fit every child in the group. So we have the independent reading period, or the rapid reading period, whatever you wish to call it, in which "every child, every day, reads something on his interest at his level." We want to teach fluent silent reading, and only that method will give the fluency required if the child is to think reading is fun and is therefore to be eager to attack harder material.

THE SILENT-ORAL METHOD

The great talk about and emphasis on silent reading did not swing the schools to the all-silent method, but it did make very prevalent the silent-oral method. This method follows the same line of reasoning as Mr. McDade. It says that since adults read "silently," the children are learning to read silently, and so the daily classroom method should be "training in silent reading." It is reasoned, with verbal logic at least, that the way to teach silent reading is to have the children read silently. So we have the common lesson plan which tells the children to "read silently."

Of course the keen book publishers realized that every lesson in their book contained new words. They knew that the teachers would immediately ask, "How can the children read words they do not know?" So various plans for pre-teaching

FOUR "METHODS" OF TEACHING READING

of words are now used. One method presents the words on the board as meaningful words but separately, one at a time. Another method creates a class discussion into which the new words are introduced, and they are then put on the board. Another plan presents the new words in the workbook, with pictures, exercises, and so on, and class discussion of this workbook is supposed to teach the words before the reading. Whatever the plan, the reasoning is that "Now that the children know all the words, they can read silently just like adults.

These plans are very logical and seem to prove their point conclusively. So one naturally asks, "Why the oral, in silent-oral?" To this there is no clear answer. It is true that if the children *can* read the whole thing silently, there is no use for the oral reading. It is at best a waste of time, and at most a boring repetition. But the oral is always there. Why? What purpose does it serve?

One parallel which is striking is that the "silent-oral" method is exactly the method of the reading demonstrator. This demonstrator is called in to show teachers how well the children can read a new reader which the school is asked to buy. The demonstrator has the teachers sitting around the room. She knows that the teachers cannot "see" the silent reading. They can only hear the oral reading. So the children have to read orally. But what is the best way to read anything orally with smoothness and clearness? Why, to study it over silently first. So the demonstrator tells all the children to work over the selection or the paragraph silently first and she gives them all the help she can short of oral reading. Then, when they have puzzled out all the hard words and are prepared, they *reread* orally. Naturally, they cannot really "read" the selection because they have read it once or more already. So the method becomes one of "silent plus oral rereading." This is, of

course, what the so-called silent-oral method always is.

Unfortunately, there is one fact that the logic of the silent-oral method does not take account of. That is the children's forgetting. It is true that every silent-oral method provides for the teaching beforehand of the new words. But what does it do for the many, many "old words" which the children have forgotten? We know that for the bright children, these words are few. We know that for the average or slower than average child, these words are very many. If one teaches the new words and then says "read silently," what do those children do? Of course we know what they do. They guess at words, they miscall words, or they just skip words. They cannot do anything else. So this fact puts the "silent-oral" method in an entirely new light. Now we can understand why the "oral" is in the phrase "silent-oral." The oral reading is there to correct the mistakes the children made during the presumed silent reading. The real description of the method becomes "try to read it silently but if you can't, we will have it read orally later."

To summarize, the "silent-oral" method makes three assumptions: (1) The children know all the old words; (2) they learn the new words; (3) they are able to use word attack in case of necessity.

THE ORAL-SILENT METHOD

The trouble that the previous method ran into, largely due to the forgetting of old words, has led to the "oral-silent" method. The reasoning is, "If you are going to have it read orally anyhow, do the oral reading where it does some good, *before* mistakes are made." So the oral reading is used to tell *all* the words to those children who have forgotten them. We can still teach the new words if we wish, by all the methods of the "silent-oral" method, but no one knows *which old words* to teach. Different children will have trouble with different ones. So to help them all,

we have the material read orally first. Then we have it read a number of times silently for thought, through the use of questions, dramatizations, and many other devices.

This method is especially good at teaching word attack. We know that all use of sounding exercises or sounding workbooks depends on transfer of training. We assume that the skills developed will be transferred to actual reading. But will they? We know that so many children "know" their phonics but seldom use phonics in reading, and prefer to guess. But when a strange word is met with in oral reading, either a new one or an old one, sounding or the use of context is in order. This is "word attack in reading," and the teacher is not assuming that it takes place but makes sure that it takes place. If she manages the situation right, stopping to sound just often enough but not too much, all can learn word attack and, above all, learn the "habit of sounding in reading," which is a most important habit in itself.

Here we must emphasize that the teacher will see that no child is going to be embarrassed by the oral reading. If to read orally would embarrass a child, he can be skipped. If to skip him would embarrass him, he can read aloud, the teacher "feeding" him words as he hesitates in such a way that few realize he is being helped. If we want the children to enjoy the process of oral reading, as they always do, we can spend more time on it. If we want to get over the oral reading rapidly, we can call on a few good readers who will rapidly go over it. It is up to the judgment of the teacher as to how she manages it for the good of all.

There must be cautions about the questions used to stimulate the repeated silent readings after the oral reading has told the words. The teacher's questions must call for the finding and reading of words, sentences, or other parts. Much silent reading is necessary for this finding. The chil-

dren will try to answer from memory without reading. We must so manage it that they cannot. There must be repeated silent readings. We wish to teach silent reading. *It must be correct silent reading.* And it cannot be for many of the children unless the oral reading comes first. That is why the "oral-silent" method has been developed.

COMBINING THE METHODS

It is true, as we have said, that many persons have used and now use one of the methods exclusively, holding that it alone is the right method for the teaching of reading. We have the indisputable fact, however, that children have learned by all of these methods. So each of the methods may fit certain needs or certain children. Combination is therefore what we actually find in practice among good teachers everywhere.

For instance, when the books given children, in whatever subject, are entirely too hard, every good teacher has to resort to the "all-oral" method for using the book. Otherwise, the children just do not get anything from them. This situation is found when books adopted for any city or other region are far above the children in some schools or sections of town. The unfortunate school cannot do anything but have the books read aloud by any of the few who can read them. Thus the others get something, learn some words, get some chance of success. Only oral reading is possible.

When, however, children have quite easy books, the "all-silent" method is inevitably used. When a favored school finds the regular books too easy, they are often just read by all the children silently for interest, and the class goes on to something else. Almost every large city has such situations. The practice schools of most colleges are such situations. The books are so easy for the advanced mental age of the children that silent reading is natural. In any school, however, there should be all silent

reading during an independent reading period every day. Every child should choose a book in which he knows almost all the words and read silently. He can ask for the few words he does not know, either from the teacher or from a "reading pal" who sits near him. So every school should have silent reading every day.

In some situations, it is thought desirable to use the "silent-oral" method. The teacher may be quite certain the particular group (usually a rapid group) know all the old words. She may know that they all have some word attack skills. Then she teaches the new words and says "Now read silently," and they can, because of the special conditions. But she makes sure of the three conditions for the silent-oral method: (1) Know all the old words, (2) Learn the new words, and (3) Use word attack.

Finally, many teachers are not willing to pretend that the children can really read the material silently first. They also are not willing to have the children struggle with word attack either because they think the

children will be discouraged or they think the words are too many or too hard. So these schools use the oral-silent method, first having the children "match sight and sound" of all words as they follow while someone reads orally, and then having them read silently many times for the getting of more thought. There may be word attack, but it is done before the oral reading, during the oral reading, or after the oral reading, depending on the judgment of the teacher. At least in this way the teacher knows what word attack is being used, she controls the word attack, and she actually teaches rather than expects the children to do the word attack by themselves.

To repeat, we should all know these four methods of teaching reading and their respective merits and demerits. We should all know how each can be used to advantage. And every teacher should so understand her children and the reading process that she can decide just when and how to use each.

11

Self-Survey of a School Program for the Teaching of Reading*

E. W. Dolch

THE TOTAL PROGRAM

Every school has a reading program which has developed as a result of many factors. Every school has customs and traditions which the staff naturally tends to

follow. Many persons are involved—principal, teachers, parents, supervisors—all of whom have ideas about the reading program which they have derived from their various experiences. Therefore, it is valuable to look occasionally at the reading program as a whole and to consider all the

* *Elementary School Journal*, L (December, 1949), 230-33.

things that affect it and that are affected by it.

As here defined, the reading program includes all plans and arrangements in the entire school system which affect the development of the children in reading. For instance, the promotion policy of the school is a vital part of the reading program; for promotion or nonpromotion means for many children success or failure in reading. The work of the history teacher in the upper grades is definitely a part of the reading program; for that teacher is making the children either better readers or greater failures in reading. Nothing that affects reading can be ignored.

The suggestion which is made in this article is that the teachers of every school or school system, while taking a look at their reading program as a whole, should answer two questions: "Just what do we do about reading?" and "What do we think of the way we are doing it?" The purpose of this "look at the reading program" is above all an understanding of the situation; how each part of the program affects every other part, and the way in which all parts are related. The purpose is not to secure immediate agreement on everything, but the whole staff should know on what they agree and on what they differ—and why. Then, in time, a sincere study of the situation may bring more agreement.

THE SELF-SURVEY

To aid educators in their "look at the reading program," or "self-survey," the outline presented in this article has been prepared. In this outline the reading program is divided into sixteen parts. Under each part, various statements of school practice are presented. Some of these practices are better than others. Some of them are often thought to be definitely bad. Some are believed by many to be indispensable. Some of the statements directly contradict others. But each statement pre-

sents school practice as it is actually found in a great many schools.

As the heading of the self-survey chart indicates, each teacher is to read each statement and then ask himself the following four questions:

1. Is the statement largely true of my school or room?
2. Is it only partly true?
3. Would I like the statement to be true but find it impossible of fulfilment?
4. Do I believe the statement should not be true?

A SELF-SURVEY

These sheets are for a self-survey of the program for the teaching of reading in your school. They present statements which are true for many school systems. To make the survey, put in front of each item a letter to show which of the following is true for that item in your room or school.

1. Largely true in my school.
2. Partly true in my school.
3. Would like to do this but cannot.
4. Do not believe this should be done.

After this self-survey, a committee should look up and present for discussion the case for and against each of the statements that is not agreed upon.

I. Beginning Reading

- A. Beginning formal reading is delayed for each child until he is sure to succeed.
- B. Ample reading-readiness materials and activities are provided.

II. Basic Reading Series

- A. The series is suited to the unfavored schools, rather than the favored, and to the lower half of the class, rather than the upper.
- B. When there are reading-ability groups, the book used suits the lower end of the group rather than the upper.
- C. On completing each book, each child is tested for mastery of its vocabulary.
- D. For those who have not mastered the vocabulary of a book, there is review instead of going right into the next one.

III. Grouping of Children in Rooms

- A. Because its centers of interest or units enable the whole room to work together as a single group, the basic reader is used at the same time by the whole room, with special help to the slow to enable them to profit.
- B. If the basic reader is used at the same time by the whole room, the poor readers have extra reading periods with easier reading materials.
- C. In each room there are reading groups at different levels with different reading books for each.
- D. One basic series is used, the slow group following the fast through the same material.

IV. Workbooks and Seatwork

- A. The workbooks, aside from general supervision, free the teacher for work with the reciting group.
- B. Other types of seatwork are also provided.

V. Teaching Method of Primary Grades

- A. Attention to content is important, but does not take the place of attention to word recognition and word attack.
- B. The basic teaching method is suited to the poor readers rather than to the good readers.
- C. Children are directed to "first read silently," then orally.
- D. The new lesson is first read orally, and then read a number of times silently to answer questions.
- E. The teacher varies her teaching methods with different groups.
- F. Individual help is given by the teacher to some children.

VI. Teaching Method in Middle and Upper Grades

- A. Word meanings are carefully taught.
- B. Word attack is systematically taught.
- C. After children have tried various word attacks and still do not recognize words, there is provision for telling them.
- D. Practice is given in "telling what you have read," without questioning.

- E. Practice is given in selecting important points.
- F. Practice is given in finding answers to questions.

VII. Promotion Plan

- A. After all factors involved are studied, some children are retained to place them in their best learning situation.
- B. Children are sometimes given extra promotion to place them in their "best adjustment" group.
- C. There are "holding points" such as kindergarten, Grade I, Grade III, or Grade VI. (Underline the one used.)
- D. There is a definite program for educating parents to understand "adjustment promotion."

VIII. Sounding

- A. Teachers of all grades know how to teach all stages of sounding.
- B. Sounding is taught as needed.
- C. Sounding is taught according to a prearranged plan.
- D. Children are taught how to use sounding in their reading.

IX. Wide Reading

- A. Every day each child does some reading that is easy for him.
- B. The teacher has a wide range of easy reading material handy when he needs it.
- C. The easy reading material is circulated for maximum use.
- D. A record of a child's reading, such as a "book ballot," is kept as a help to guide him in his reading.
- E. Home reading is encouraged but not demanded.

X. Reading in Content Subjects

- A. If each child has the same content book, the teacher makes sure each child can read it.
- B. If they cannot read it, he has it read to them.
- C. If a variety of books are available on one subject, they are at a number of reading-difficulty levels.
- D. The teacher demonstrates repeatedly how to study each subject.

- E. Adequate reference books are available.
- F. Children are stimulated, rather than required, to use them.

XI. Student Help

- A. Good readers are used to head up reading groups.
- B. Good readers help poor readers.
- C. Good readers help handle the wide reading materials.

XII. Tests and Testing

- A. Survey tests are given for supervisory purposes only.
- B. An oral reading test (Gray Oral or other) is given to help the teacher know the work of each child.
- C. Regular reading tests to help the teacher are given at beginning and end of each year's work.
- D. Results from reading tests are studied to improve instruction.
- E. Intelligence tests given to poor readers are nonverbal.

XIII. Remedial Teachers

- A. They help all teachers to handle their own poor readers.
- B. They help teachers by diagnosing individual cases.
- C. They help individual children who have fallen behind.
- D. They help children who have been absent to catch up.
- E. They teach classes of poor readers.

XIV. Reading Clinic

- A. There is a public school reading clinic.
- B. The clinic is operated in such a way as to show teachers how to handle reading cases themselves.
- C. The clinic results are used to improve the teaching of reading in the whole system.

XV. Special Classes

- A. At some levels, there is sectioning on reading ability.
- B. The mentally handicapped are removed from reading classes and put into special classes.

XVI. Added items, not included in the above (Write in any aspects of your reading program which are not covered by

the 61 statements you have already marked.)

It would be well if each item on the self-survey could be explained and discussed, but limitations of space forbid. Some of these concepts are well understood and, therefore, self-explanatory; others are controversial. Since it was necessary to compress each item into small space, it may be that some essential items have been omitted. The writer would be glad if readers who note omissions or obscurity would communicate the facts to him. This self-survey is being used by school systems which are trying to improve their reading programs and should be made as complete and accurate as possible.

In evaluating the reading program, it is urged that the teachers make this survey and then come together to discuss their ideas. Of course, a principal could do the same, or any other member of the school system could make an inventory in this way.

CONCLUSIONS

Through the use of this self-survey form in several school systems, some important facts have been brought out. First, a good morale must exist in the school and in the school system, or there will not be frankness on the part of all concerned. If a good morale is not present, the principal should not ask the teachers to express themselves because they will simply not feel free to do so. Second, a great amount of disagreement must be expected. It is rather astonishing to find that teachers working side by side in friendly cooperation can have such opposite views on many items in the reading program. Bringing out these opposing viewpoints, however, does not injure the situation if all persons are earnestly trying to do the best for the children. Third, the ensuing discussion must not be in terms of who is right but in terms of what is actually helping the children with their reading. Finally, it is suggested that the self-survey will lead to experimentation.

Teachers who have always followed one method of teaching reading may try another, if only in an experimental spirit. The whole school may decide to work to-

gether on a new system. This plan of action is the only wise one; for, in the long run, each school and each teacher must be convinced from experience.

12

A Questionnaire on the Beginner*

Helen L. Crocker

Classroom teachers today realize that the graph of a child's growth is never a smooth upward curve, but is a succession of lags and spurts in an upward trend. We know that we can never hope to obtain a definite schedule for introducing various performances and activities into the child's training because the child does not become ready for a given activity at one particular day or hour, and a child's behavior is influenced by many variables that are difficult to weigh or define. How can we learn any child's "growth pattern" without help from the parent? How can we hope to do the best job possible teaching reading without knowing each child's pattern for growing? In *Infant and Child in the Culture of Today* Arnold L. Gesell states that, "the most important index and symptom of a child's individuality is his mode of growth."

Surely we teachers should know much more than we ordinarily do about the child before he comes to school. But would parents refuse to tell us? If they were approached in some understanding way, would parents realize we were not being intrusive, but were really desirous of developing two-way communications between

the school and the home in an earnest endeavor to help each child? Believing that parents were ready to help, several years ago we developed a questionnaire and sent it to the home of every first-grader during the first week of school.

QUESTIONNAIRE INTRODUCED

We use a friendly letter to introduce the questionnaire to parents of these first-graders:

Dear Parents:

Parents know their children *so* well. Teachers, too, want to know the children as well as they possibly can. Our children are *your* children. Without your help the only way I can learn to *know* any child is by finding out just a little here and a little there as time goes on, and many of the most important things I never learn. If I really know a lot about your youngster, I can do much more to help him get a good foundation in his first year of school.

Please do not think that I am prying into the life of your child. The questionnaire you will find attached to this letter is a way in which I can really *know* your child better. Some of the questions may seem very foolish to you, but all are helpful to me.

* *National Elementary Principal*, XXXV (September, 1955), 38-42.

- E. Adequate reference books are available.
- F. Children are stimulated, rather than required, to use them.

XI. Student Help

- A. Good readers are used to head up reading groups.
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A Questionnaire on the Beginner*

Helen L. Crocker

Classroom teachers today realize that the graph of a child's growth is never a smooth upward curve, but is a succession of lags and spurts in an upward trend. We know that we can never hope to obtain a definite schedule for introducing various performances and activities into the child's training because the child does not become ready for a given activity at one particular day or hour, and a child's behavior is influenced by many variables that are difficult to weigh or define. How can we learn any child's "growth pattern" without help from the parent? How can we hope to do the best job possible teaching reading without knowing each child's pattern for growing? In *Infant and Child in the Culture of Today* Arnold L. Gesell states that, "the most important index and symptom of a child's individuality is his mode of growth."

Surely we teachers should know much more than we ordinarily do about the child before he comes to school. But would parents refuse to tell us? If they were approached in some understanding way, would parents realize we were not being intrusive, but were really desirous of developing two-way communications between

the school and the home in an earnest endeavor to help each child? Believing that parents were ready to help, several years ago we developed a questionnaire and sent it to the home of every first-grader during the first week of school.

QUESTIONNAIRE INTRODUCED

We use a friendly letter to introduce the questionnaire to parents of these first-graders:

Dear Parents:

Parents know their children *so* well. Teachers, too, want to know the children as well as they possibly can. Our children are *your* children. Without your help the only way I can learn to *know* any child is by finding out just a little here and a little there as time goes on, and many of the *most important things I never learn*. If I really know a lot about your youngster, I can do much more to help him get a good foundation in his first year of school.

Please do not think that I am prying into the life of your child. The questionnaire you will find attached to this letter is a way in which I can really *know* your child better. Some of the questions may seem very foolish to you, but all are helpful to me.

* *National Elementary Principal*, XXXV (September, 1955), 38-42.

Of course, you do not have to answer this questionnaire, but I earnestly hope that you will. Anything that you tell me will be kept in strict confidence, I assure you.

Sincerely yours,
(Teacher's name)

Instructions: Do not hesitate to answer "Yes" to any of these questions. Almost *every* child has these habits or does these things, but it will help me to help your child if I know about them.

1. Name of the child
2. Are there other children in the family?
- a. If so, how many girls? How many boys?
- b. Where does this child come in the group?
3. Is a foreign language spoken in the home?
- If so, please check how often it is spoken
 Always Quite often
 Only sometimes
4. How old was your child when he (or she) began to walk?
5. How old was your child when he (or she) began to really talk?
6. Fears
- a. Does your child have any special fears?
- b. What are those fears?
- c. Do you know how those fears first got started?
- d. What have you done about those fears?
7. Bedtime
- a. About what time does your child usually go to bed?
- b. Does he (or she) have a quiet time before going to bed?
- c. Does the child sleep alone?
- d. Does he (or she) fuss about going to bed?
- e. Does he (or she) want a light kept burning?

- f. Does he (or she) have frightening dreams?
- g. Does the child wet the bed at night?
- h. Do you take him (or her) to the toilet before he goes to bed?
- i. How many hours of sleep does the child usually have?
8. Does your child suck his (or her) thumb?
9. Does your child have "temper tantrums"?
- a. If so, what seems to cause them the quickest?
- b. What do you do with him (or her) at home if the child has a "temper tantrum"?
10. Do you ever punish your child?
- If so, what punishment seems to work the best?
11. Social Behavior
- a. Does your child enjoy company in the home?
- b. Does he (or she) enjoy playing with others?
- c. When he (or she) plays alone, what does the child seem to enjoy playing the most?
- d. On rainy days, or any time when the child cannot go out, does he (or she) find things with which to amuse himself or does he ask you to suggest what to play next?
- e. What are your child's favorite toys?
- f. Does your child enjoy television? ...
 (1) Is he (or she) content to watch just the programs scheduled for children or does the child tease to see the ones you parents enjoy?
- (2) Do you feel that your child has been influenced by the programs he (or she) has seen?
- g. Does your child like books?
- (1) If so, what kind does he seem to enjoy most?

- (2) Do you read to your child?
 If so, please check how often
 Every night
 Frequently
 When he asks
 Once in a while
 (3) Does your child have books he
 can call his very own?
 (4) Does the child seem to show any
 interest in wanting to learn to
 read for himself (or herself)?

12. Eating

- a. Does your child have a good appe-
 tite?
 b. Is he (or she) fussy about his food?

 c. Does he (or she) play with his food
 while he is supposed to be eating?

 d. Does the child like to eat between
 meals?

13. Does your child cry easily?
 If so, is it when he (or she) is hurt,
 when he does not get his own way, or
 for some other reason?

14. Does your child seem to show any signs
 of jealousy?

- a. If so, of whom does he (or she)
 seem to be jealous?

- b. How does the child show his jeal-
 ousy?

15. Does your child ask you many ques-
 tions?

- a. What does he (or she) seem to be
 most curious about?

- b. If your child asks me about babies,
 or similar questions, do you want me
 to answer him (or her)?

16. Does your child like to help at home?

- a. If so, do you have to ask him to do
 a task, or does he look for things to
 do himself?

- b. Do you give him (or her) definite
 little jobs to do in the house or the
 yard?

17. Are there any other things you would
 like to tell us about your child that

would help me to know him (or her)
 better?

There is an old saying that "a burden
 shared is only half a burden." This is
 especially true for parents and teachers.
 Very often something that is a problem at
 home does not appear at all at school, and
 a problem at school may never have been
 observed at home. For this reason, I do
 hope that you will feel free to talk over
 any problems you have with your child
 with me, just as I want to feel free to talk
 with you. In that way, we can help the
 child to be happy and to learn.

Thank you very much for spending time
 on this questionnaire. I sincerely appreci-
 ate it.

RESPONSES AND THEIR VALUE

The cooperation the school has received
 from parents has been beyond expectation.
 The questionnaire has been made part of
 the readiness program in Middletown,
 Rhode Island, and the response to it has
 been 98 per cent—high for a question-
 naire.

The story the parent tells in response to
 these questions is invaluable to teachers,
 for it is a fairly complete picture of the
 child—his physical, emotional, and social
 pattern of growing. Some of the questions
 may seem of little use. For example, teach-
 ers have inquired why we ask about walk-
 ing and talking. If we know that a child
 learned to walk and talk quite late, we can
 expect that he may not be ready to read
 as soon as a child who walked and talked
 at an early age. Reading experiences and
 home experiences go hand in hand, and
 knowing as much as possible helps us to
 help the child have a rich reading pro-
 gram. Or if we know the child's fears,
 reading selections that pertain to them
 often help calm their worries and we can
 be on the lookout to soothe their emo-
 tional reactions along the way. Most par-
 ents are delighted that the teacher cares to

know the child so well, and it makes for a bond between the school and home.

Perhaps this does not seem like reading readiness to the reader, but how can we recognize readiness without knowing the child? Thru several years of use the questions have proved their worth to us, and we hope that they may help other teachers. Readiness begins at home but it does not end at home. Let us keep that door between school and home wide open.

The years of childhood are the years of wonder and question and surmise. A child's active and ranging mind can find in books, and nowhere so well as in good books, the material to enrich the experiences of these

years, in spite of the limited and uneventful environment which is the usual lot of childhood. The quality of the material children find in books is fundamentally important. Although children have strong individual likes and dislikes, they are uncritical in the sense that their literary judgments have not only the validity of their years and inexperience. They have not as yet progressed to the point of reasoning and analysis. Unfortunately, too, in the case of inferior stories, children bring so much of their own imagination and concentration to the reading of a book that even the commonplace book is enhanced for them by their own racing fancy.

—LILLIAN H. SMITH, *The Unreluctant Years*, American Library Association, 1953, p. 133.

13

How To Diagnose Children's Reading Difficulties*

E. W. Dolch

The first sign of a poor reader is his attitude toward reading. He does not want to read. He looks away from his book instead of into it. Also he probably shows a general dislike of school or school work which has resulted from failure in reading. In fact, as soon as a teacher sees a conduct case, she should immediately look into the reading problem with that child. None of us likes what we fail at, and failure in school usually means dislike of school and of teachers and of books and of all related matters. And the most usual failure in school is in reading.

* *The Reading Teacher*, VI (January, 1953), 10-14.

Failure to get lessons done is very often a sign of poor reading. The pupil may look into his book and seem to be studying earnestly. But instead of studying the lesson, he is studying the words and sentences, trying to make something out of them.

Children often get wrong answers because of poor reading, and teachers call it "carelessness." Children often fail to finish assignments because of poor reading, and teachers call it "laziness."

Before we use those condemning words, let us find out about the reading ability. It is astounding how, in middle and upper grades, children can go on for weeks or

months as poor readers without the teacher's realizing the fact.

LOCATING THE POOR READERS

If, however, the teacher takes the precaution at the beginning of the term, of having every child read something orally, these mistakes could not happen. She can best make this oral test by telling the class that they want to become acquainted with a new book, and she wants to know how hard the book is. To find out how hard the book is, they will all take part in reading it aloud.

As fast as they can, each will read a sentence in turn. Then several things may happen. First, some child may refuse to read. The teacher will cheerfully say, "All right. Next one read on." Or a child will read with great hesitation and difficulty. To him, the teacher will instantly supply any word that stops him, say "Good," and go on. Since each reads but one sentence, there will be little embarrassment.

But the teacher will have her poor readers picked out for her at once. Many of the children may have trouble sounding out really hard words, or may cheerfully mispronounce hard words. Both facts tell the teacher that most of the class need a review of sounding. But this quick oral reading will locate in a few minutes the poor readers who need further attention.

Children indicated as poor readers need to be further diagnosed. This is usually done individually and privately before school or during a recess period or after school. It should be done in as friendly and incidental a way as possible.

A good plan is to have on the desk a pile of easy, attractive-looking books. Ask the child, "Do any of these look interesting?" He will finger them and open them up. The teacher will notice which one he dwells upon, thus showing some interest.

If the book seems suitable, she will say, "Read me some of it. Just any place that looks like a good story." Then as the boy

tries to read, she will note mentally several important and definite things.

HOW DOES HE HANDLE LITTLE WORDS?

First, what does the child do with the little words that appear constantly, such as *was* and *they* and *very* and the like. Does he recognize them? Does he miscall any of them? Does he recognize them easily or does he do so slowly and with difficulty?

The importance of these common words is that no one can read easily and smoothly at any level unless he knows these common words surely and quickly. If the child does not know these common words surely and rapidly, he can easily be taught them with the aid of a fellow pupil. He must be given reading matter of first or second grade level, which is made up principally of the common words. Beside him must sit a helper who will tell him every word on which he hesitates. Then he must reread to show that he now does not need to be told.

Or these words can be taught by means of games. At any rate, without quick recognition of the common words, there is nothing that can be called successful reading.

HOW DOES HE ATTACK HARD WORDS?

Second, if the child knows the common words surely and easily, what happens when he comes to a *hard word* or *one he does not know*? For one thing, he may just guess and go on. If so, he has the habit of "skip and guess" which many children are forced into by being given material that is beyond them. Such a child needs oral reading, with a gentle pressure to read exactly what is on the page. Reading with a helper is required, either a helper at home or in school.

Another thing that may happen is that the child may try to call the strange word by seeing familiar parts in it. He may use

part of the beginning, the middle or the end, leaving out parts he does not know, and struggling to make up some word from what he sees. This is the "familiar-part" attack which good readers use so successfully. That is, the good reader sees some familiar parts, and the context suggests to him the word which must be there.

The only trouble is that, on the one hand, the poor reader does not use context skillfully, and on the other, he does not have in his head the large meaning vocabulary from which the good reader draws his words. For instance, when the good reader sees "it was und . . . edly true," he infers that the word is "undoubtedly." But the poor reader does not know the word "undoubtedly," and therefore he is not helped by the familiar parts. So the poor reader will often show, by the strange things he calls new words, that he is trying the familiar-parts method, but without success. The teacher watches the pupil's every mistake, and from each mistake she learns what the pupil is doing.

Another kind of attack the poor reader may use is letter sounding. If he just moves his lips or whispers, the teacher will encourage him to try out loud so that she can help him. He may refuse to do this if he is too afraid, but even if he does not sound out loud, the teacher watches the result of his tries.

Of course she praises whatever he does. No matter how grotesque the result, she says, "Fine. That was a good try." Or she may say, "You almost got it. The word is so-and-so." Only if the child feels her active friendliness will he show what his troubles are so that he can be helped.

Some of the results the teacher may find are, for instance, that the child calls all vowels long, or cannot blend consonants, or knows no vowel combinations, or sounds the parts but cannot get the word, and so on. Such information is vitally necessary if the teacher is to help the poor reader. Division into syllables is the best

kind of attack on long words. It will probably not be found with poor readers, but if it is, there may be trouble in making the right word from the syllables. That is, the child may correctly divide the word, sound the syllables, say them one after another, and still not know what the word is. Usually this is a sign that he does not have the word in his hearing vocabulary. But when the teacher says the word, he may show that he really knows what that word is. In such a case, there is undoubtedly difficulty in what is called "synthesis," that is, putting the parts together into the known word.

DOES HE UNDERSTAND THE MEANING?

Third, we come to the problem of *comprehension*. Here the teacher who is diagnosing the child's trouble will look for three things. Most important, does the pupil know the meaning of the words he reads? She will ask about particular words. What does this one mean, or that?

Whatever the answer, she will praise attempts or guesses. The slightest sign of censure or scorn will assure the child that he is being criticized or made fun of just as he has been criticized or made fun of by pupils and teachers for years.

The chances are that the long sentences in the text are too long for the child's comprehension. Have him read a long sentence, and then ask him to tell in his own words what it says. If he cannot, let him try again. It may be he just has the habit of saying words without attention to the thought. If, after he has tried several times, he still cannot tell what the sentence says, then obviously it is beyond his span of attention to ideas. This may be the explanation of why his textbook is beyond him.

The third check is upon comprehension of paragraphs. It has two aspects. First, can the pupil, after reading a paragraph of six to eight lines, tell rather completely all that is said in the paragraph? This is an

aspect of span of attention for ideas. Let the pupil have several tries to see if the problem is inability or inattention.

The other aspect of paragraph reading is selection. Can the child select the important idea from what he reads in a paragraph or do the ideas seem equally important to him? This, of course, is a rather advanced ability, and does not come to children nearly so soon as we imagine. Likewise, it will not come to many unless there is skillful teaching. Hence, this check is not so significant in the case of poor readers. But the other checks are. It is so very common for children in the middle and upper grades to be reading words for which they have no meaning, or sentences that they do not understand, with a result that when they are through they have no idea of what they have covered.

THE COMPLETE TEACHER CHECK

Perhaps we should here emphasize that this complete teacher check does not happen just as we have described it. For one thing, there may not be time at odd moments of conference with a pupil to run through all of these steps. The child may read for the teacher a little now and a little then, while she encourages and makes friends, and builds up for herself this complete picture of the child's reading.

For another thing, not all of these steps may be necessary in any one case. If a child does not know the common words or has no word attack, a check on his comprehension is hardly possible. Or a child

may obviously have certain skills but not others. All of these things depend on the grade concerned and the particular child.

A teacher, of any grade, however, should have clearly in mind the things she would like to know about the child's reading. As we have presented them, they are:

- A. Does he know the common words?
 - 1. How many?
 - 2. How accurately?
 - 3. How rapidly?
- B. What kind of word attack and how successful?
 - 1. Mere skip and guess
 - 2. Familiar parts
 - 3. Letter sounding
 - 4. Syllabication
- C. Comprehension
 - 1. Word meanings
 - 2. Sentence comprehension
 - 3. Paragraph comprehension
 - a) Details
 - b) Important ideas

The teacher who tries this method of informal diagnosis of reading difficulties will be surprised at how rapidly she develops skill in its use. She will find before long that she can tell a surprising amount about a child's reading abilities and habits just by hearing him read a little from almost any book. She will find herself using this diagnostic ability easily and frequently in school work of all kinds. And the children under her charge will benefit greatly, for the teacher with the ability to diagnose reading difficulties will become in every possible way a better teacher of reading.

Building Readiness for Reading in First-Grade Children thru Special Instruction*

Lillian Orme

Elementary-school educators know that much of pupil nonpromotion occurs in the first grade, that inability to read is a leading reason for nonpromotion, and that many nonpromotions represent a failure of the school rather than of the pupil. Placing responsibility on the schools is justified after viewing the success of later remedial instruction which is adjusted to the abilities and interests of children. This outcome suggests that many children might have succeeded from the beginning had their initial instruction been as well adjusted to their needs as the remedial teaching.

With this knowledge in mind we experimented with a special program of initial instruction at the W. W. Yates School in Kansas City, Missouri. Our specific purposes were: (a) to develop a special readiness program with emphasis on the reading needs of first-grade pupils, (b) to test the value of readiness materials, and (c) to determine the degree of success of this program.

EXPERIMENTAL PROCEDURE

The matched group technic was used. Entering first-grade pupils were divided into two groups, one control group and one experimental, each group having the

same distribution of intelligence test scores as determined by the *Revised Stanford-Binet Scale*. Two rooms of first-graders taught by two regular teachers made up the control group. One room, taught by the writer, made up the experimental group.

During the first month in school, all the first-graders were given the *Metropolitan Readiness Tests*. The scores showed that slightly more than 78 per cent of all the children were not ready for formal instruction in reading: 77 per cent of the experimental group, 82 per cent of one control group, and 76 per cent of the second control group.

Materials and Methods. The materials and methods used with the experimental group differed appreciably from those used with the control groups. The experimental group used reading readiness and preparatory books, pupil workbooks accompanying the basic readers, supplementary materials such as picture cards, phonetic cards, charts, tests, and other books and related content.

Materials for reading in the control groups were not designated by the experimenter. They were allowed to proceed with their reading instruction in nearly complete freedom of choice of materials and technics. Principal materials used in

*The *National Elementary Principal*, XXXV (September, 1955), 43-46.

the control groups were the basal reading series, supplementary texts, preprimers, flash cards, charts, and similar ones. The absence of direction of procedures and technics for the control groups was to establish or to maintain as nearly as possible the conventional or normal practice of reading instruction. The only restriction was that reading readiness books were to be used only by the experimental group.

For the experimental group a longer time was allowed for the readiness period

before beginning teaching the reading skills. The length of the readiness period depended upon the developmental level of the individual child, his adjustment, and progress. The program of special instruction was designed to include: (a) the city-adopted course of study, (b) activities to meet specific needs, and (c) provisions for the varying rates of progress of pupils.

The room of the experimental group was arranged in seven centers of interest with appropriate materials:

Center of Interest

Purpose

Reading Center

Reading table, chairs, bookcase, bulletin board, reading easel, readiness books, charts, *Our Big Book*, basic readers, workbooks, pictures, word phrases, and sentence cards, phonetic cards, chalkboards, pocket card holder

Children worked directly with the teacher for development of reading readiness and of reading.

Library Corner

Reading table and chairs, picture and story books, preprimers and primers, mounted pictures and picture cards, scrap books, picture dictionary

Free reading by the children

Play Corner

Playhouse equipment, dolls, toys

Dramatic play and social experiences

Science Center

Table, shelves of specimens and exhibits, magnet, aquarium

Interest and observation

Arithmetic Center

Abacus, beads, bottles, (half pint, pint, and quart), buttons, clock dial, play money, ruler, yardstick, splints, calendar, geometric forms

To help develop number readiness and build number concepts

Painting Center

Easel, newspapers, cloths, tempera paints, large brushes, jars

Medium for self-expression and development of physical dexterity

Sharing Center

Games, puzzles, toys, things children bring from home, class projects

Child interest in and sharing with others

Results at End of the First Year. At the end of the first year, all the children were given the *Gates Primary Reading Tests*. The scores of the children of the experimental group were above those of

the children in both control groups. A gain of two months on the average was made by the experimental group over the first control group and three months over the second control group.

Results at End of the Second Year. The pupils entered the second grade in the normal enrolment process. Since each class remained fairly intact, there was opportunity for further study of the effects of the readiness program. The writer did not teach the pupils in the second grade. Although no special instruction was provided during the second year, the probability of permanence of the earlier instruction was indicated by the results of the *Gates Advanced Primary Reading Tests* which were given to the pupils at the end of that year. The children who had been in the experimental group maintained superiority in all areas of the tests. The predictive value of the reading readiness tests used before beginning reading was shown by the fact that those pupils who reached or exceeded the norm on the readiness tests invariably succeeded with reading, and, conversely, the poor risks remained poor risks except for the few

who received the adjusted program of instruction in the experimental group.

IMPLICATIONS FOR SCHOOL PROGRAMS

Children of the first grade who are found to have deficiencies in readiness should neither be excluded from the first grade and put with younger children in the kindergarten nor forced into a beginning reading program for which they are not ready. They should be given a definite program of readiness training which offers them a chance to succeed, with methods and materials adjusted especially to meet their needs and abilities.

At all times the first-grade program must be planned for the continual development of the skills necessary for reading progress. By presenting a varied and rich reading readiness program the first-grade teacher is assured of guiding a maximum number of pupils to success in reading.

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Ready to Read?*

Elizabeth M. Jenkins

Let any teacher of remedial reading name the most common deficiency in her pupils' background, and she is almost certain to include the pupils' "inability to distinguish between the various sounds in the spoken words" or their "lack of auditory discrimination of sounds."

"These retarded readers have the intelligence to learn," a sixth grade teacher

pointed out, "and they're not 'tone deaf.' But when it comes to the auditory perception of a word, any word, they're just plain nil."

Not only should the auditory precede the visual perception of words, but most children need a great deal more experience in *hearing* the spoken units in words than the average readiness program provides. Parents, I find, are willing to let formal reading wait until their children have

* *Grade Teacher*, LXXI (April, 1954), 56, 90, 92, 94.

achieved an adequate background for reading, once they understand its relation to future success in reading. Even after the children have begun reading, their auditory education should continue, not only in the first grade, but on all subsequent levels of learning to read.

LEARNING TO HEAR THE SPOKEN UNITS IN WORDS

We begin our auditory experience by *learning to hear* what is known as the *beginning* of familiar words. Sometimes we start with the children's names. I may say, "I see someone whose name begins with *ca* (pronouncing, not spelling the unit). Who is it; can you tell?"

"You're right! It's Cathy."

"This time I'm thinking of someone whose name begins with *wi*."

"William," the children answered.

"Sure enough! But we have someone else whose name begins just like William's."

"Billy," I was told.

"No, Billy begins with *bi* and the name I'm thinking of begins with *wi*. What girl in our room has a name that begins with *wi*?"

"Winifred," I was finally told, and we were on our way, learning to *hear* (but not yet see) spoken units in words.

From the children's names, it's an easy step to familiar action words. I may say, "I am going to ask you to do something. As soon as you hear what it is, you may do it."

"You may *cla-p*."

The children clap to show that they recognized the word by its units *cla* and (p).

"Now let's *ski-p*."

"Now let's see how high we can *stre-tch*, *stre-tch*."

"That felt restful, too, didn't it? Now let's see how nicely you can *si-t*. Good for you! That was fun, too, wasn't it?"

The children will want to go on and on, but if you have managed to get even

this much done in one uninterrupted period, you are among the fortunate few who still have time to teach.

It's tomorrow now, and I may say, "Let's play the game in a different way. I am going to say the word in its parts but this time you must *tell* what the word is. Here we go!"

"My word is *ho-p*, *ho-p*." George answered, "hop," showing that he had recognized the word by its spoken units, its beginning and ending.

"Tell us the word again, George, but this time let's hear a nice strong (p) at the end of the word, shall we?" (pronouncing, not naming the letter p).

This time George came through with a beautiful ending on his word, and of course, I expressed my pleasure in his success. After that, not only George, but nearly all the others tried harder than ever to improve their speech.

We then continued the exercise with the following one-syllable action words. The hyphen shows where to divide the word in pronouncing it to the children.

<i>ru-n</i>	<i>ea-t</i>	<i>swi-m</i>
<i>swee-p</i>	<i>scr-u-b</i>	<i>kno-ck</i>
<i>stoo-p</i>	<i>smi-le</i>	<i>tur-n</i>
<i>sli-de</i>	<i>slee-p</i>	<i>si-t</i>

From our action words we extended our experiences to things in the room.

"I see something and its name begins with *clo* and ends with (ck). What is it, Gene?"

Gene answered, "clock." If he hadn't, I would have repeated the word *clo-ck*, *clo-ck*, clearly and distinctly in its two parts or units.

"Congratulations, Gene! You pronounced such a nice (ck) at the end of *clock*."

Other things in the room provided the words for our listening experiences.

<i>fla-g</i>	<i>de-sk</i>	<i>blo-ck</i>
<i>fi-sh</i>	<i>sha-de</i>	<i>ligh-t</i>
<i>sea-t</i>	<i>toy-s (z)</i>	<i>pa-ste</i>
	<i>car-d</i>	

After that, the names of animals furnished material for further experiences in auditory discrimination.

du-ck	mou-se	do-g
goo-se	ca-t	chi-ck
gee-se	pi-g	shee-p
	goa-t	

We also used pictures of playthings, foods, and things to wear to provide the motive and the names for our exercises.

Perhaps it should be pointed out:

1. Each of the words I pronounced to the children is composed of two spoken units, a beginning and ending unit.

2. The vowel is included in the beginning unit, because it is always pronounced with the beginning, and not with the ending consonant of the word or syllable. In speaking and singing the word *clap* for example, *clap* is pronounced cla-p never cl-ap; *flag* is pronounced fla-g never fl-ag; and *duck* begins with du and ends with (ck).

3. The ending *p* is correctly pronounced (p) and not (puh) as is so often heard; *t* is pronounced (t) and not (tuh); and the letter *d* should not be pronounced (duh); or *g*, (guh); or *b* (buh).

4. The words used in these exercises are not to be written on the board, since they are *heard*, and not seen at this stage of readiness in reading.

5. Encouraging children to pronounce the units in the words distinctly does much to improve their speech in all their oral work.

It might be of interest to report:

1. The results of our repeated efforts to pronounce the endings, as well as the beginnings of words, are already discernible in the children's daily speech.

2. The art of listening and speaking learned in these simple exercises is carrying over into all our language activities. The children's voices, too feeble to be heard at first, are now becoming adequate for the classroom.

RECOGNIZING A WORD BY ITS BEGINNING

"Now we're ready for another new experience. I am going to pronounce the *beginning* of a word. But only its beginning! Then you must tell what the word is."

"That's easy!" I was told.

"Fine! Here we go. I see something in the room and its name begins with *fla*. What is it, Bonnie?"

Bonnie answered, "flies."

"Flies," I said, "begins with *flie*, and the word we want begins with *fla*."

"I know!" Charles said. "It's *flag*."

After having listened to the other children's responses, I again called on Bonnie, and again she missed. But by and by she "caught on" as one of the children said, and now Bonnie is succeeding with the rest of us.

"What other words can you think of that begin like *flag*?" I asked.

The responses came almost instantly: "*flat, flashlight, flash!*" "And *flabbergasted!*" Dwight said, showing that he had learned something from his teacher.

Here are the names of other things in the room, of which I pronounced only the beginnings. The words in parentheses indicate the children's responses.

fi	(fish)	pi	(pictures)
snai	(snails)	wi	(windows)
clo	(clock)	char	(chart)
pai	(paint)	cur	(curtains)
flow	(flowers)		

The next day I told the children, "You did so well yesterday, I know you're going to do even better today. I am thinking of a little creature and its name begins with *ca*. It has soft paws and purrs when you pet it."

"Cat," came the answer.

"What other animals' names sound just like *cat* at the beginning?"

"*Camel, caterpillar, kangaroo,*" I was told, all of which are correct.

The children then gave me all the words they knew that begin with *ca*: *cabbage*,

carrots, cantaloupe, captain, camera, cap, calendar, Carol and candy.

"I know another one," Mildred volunteered, "camanure."

"That sounds like a brand new word," I said. "Can you tell us what it means?"

"Yes," said Mildred obligingly, "it's what you spread on the garden to make the stuff grow!"

It was George who came to the rescue. "I know what she means," he said. "Mildred thinks *cow* begins with *ca*."

The next day the children gave me all the words they knew that begin with *bu*: *butter, bugs, butterflies, bus, bunches, buns, bumps, bumpers*, and last of all the little word *but*.

So we were one step nearer the goal of readiness for independent word recognition in reading.

RECOGNIZING THE BEGINNING OF A WORD

"This time we're going to play our game the other way round. I am going to pronounce the *whole* word and you must tell how it *begins*. Tell only the beginning. Nothing more! If I say *jump*, you will answer "ju" because *jump* begins with ju.

"Jump."

Everyone laughed and answered "ju."

"Now what beginning do you hear in clap?"

Charles, in answering "cla" pronounced such a nice (a) at the end of *cla*, we all clapped for him.

"What beginning do you hear in *sheep*?" I asked.

Donna answered, "shee."

I then pronounced the animals' names below. After each pronunciation the pupil told how the word begins. The under-scoring indicates the pupils' correct responses.

<i>chicks</i>	<i>puppies</i>	<i>fox</i>
<i>ducks</i>	<i>camel</i>	<i>mouse</i>
<i>cubs</i>	<i>lamb</i>	<i>mice</i>
	<i>pigs</i>	

RECOGNIZING THE ENDING OF A WORD

"Now comes another new experience. We have been hearing the beginnings of words, now we're going to hear the sound at the end of our words. We know that *sit* begins with *si*, but how does it end?

"What sound do you hear at the end of *sit*, Charles?"

Charles answers "t" giving the sound, not the name of the letter.

"Good for you, and that was such a nice, clear (t) you gave us."

"What sound do you hear at the end of *ca-p*, Donna?" (pronouncing the word in two parts to give Donna the help she seems to need). "Listen again Donna. What sound do you hear at the end of *ca—p*, *ca—p*?"

This time Donna got it and we all rejoiced with her.

I then pronounced each of the following words, asking each time, "What sound do you hear at the end of —?" (always pronouncing the ending of the word strongly):

goa-t	shee-p	tra-i-n
tru-ck	wa-tch	chie-f
sle-d	be-d	be-ll
dru-m	hou-se	sto-ve
boo-k	do-g	roo-m

We followed the same procedure with the following action words:

ho-p	swee-p	smi-le
ski-p	sli-de	stre-tch
kno-ck	tur-n	ska-te
	ru-n	

Finally we had the fun of demonstrating the skills we had so far achieved. "Let's have a little test, shall we?" I asked. "Each of you, in turn, may answer my question, beginning with Ronald. On your mark! Get set! Here we go!"

"What beginning do you hear in *sand*? In *bell*? In *stick*?"

"What sound do you hear at the end of *sit*? At the end of *cup*? At the beginning of *hats*? At the beginning of *bus*?"

"Think of a word that begins with *se*."

To my amazement, I got *seven, seventy, several, send, sell, selfish* and even *separate*!

"What beginning do you hear in *bug*, in *bed*, in *box*?"

It was exciting to hear each correct response: "*bu, be, bo.*"

How well would my friend's remedial reading "cases" do on a test like this, I wondered.

From our auditory experience we proceed to visual discrimination of familiar words. And from there, after many weeks, to the first book in Functional Phonetics which prepares the children for independent word recognition in reading.

When my young readers begin to beg, "Please don't help me! I can work that word out myself with my cues," I know that we are enjoying the returns of our investment in readiness for reading.

16

Readiness and the Development of Reading Ability at All School Levels*

Elona Sochor

The concept of readiness for learning, with its implications for teaching, has long been recognized in education. Without a state of readiness among learners, most of what may have been developed or taught in a classroom is forfeited.

A state of readiness at any particular time has a highly complex nature. It is a composite of a pupil's physical, social, emotional, intellectual, and language development. It reflects his past environments, his conditioning, his training, and his knowledge.

Moreover, any one of these factors cannot be isolated in reality. They are all highly interrelated in any one child, and the state of relationships may vary in different situations. In any group of children, there will be ranges in differences for each of the factors.

No pupil enters a school building devoid of any readiness. On the other hand, no two learners are alike in their states of readiness. Due to the multiplicity of factors, the ranges of differences increase as pupils grow older.

The existence of readiness for learning cannot be assumed. It must be assured, first, by appraisal and, then, by development. Being fundamental to all instruction, readiness for learning is a basic concern of all teachers at all times and at all school levels.

One important element in any instructional program is the development and use of reading ability. Since reading is a learned process, readiness is a factor which must be considered for any activity involving reading. To limit appraisal and development of readiness to beginning reading is to ignore the fact that developing

* *Education*, LIV (May, 1954), 555-60.

reading ability is a continuous process extending in some respects into college instruction. Insuring readiness for reading must of necessity be a continuous process.

Considerations in readiness for reading, then, may be classified into two categories for purposes of discussion: Those basic to any learning process; and those that apply more specifically to reading.

READINESS FOR LEARNING

Basic considerations in readiness for any kind of learning include: (1) physical status, (2) mental capacity, and (3) emotional-social maturity and adjustment. In reading, "A mental, emotional, and physical readiness for sustained reading activities possesses as much significance in a modern secondary school as it does in a modern primary school."

Physical Status. Much is known about the importance of physical factors. The need for recognizing physical disability is obvious. A child who is unable to see the printing on a page cannot perceive the words. The child with a hearing loss will not profit from much of the typical activity in auditory discrimination. The malnourished or ill child will be unable to put forth the sustained attention necessary in reading. Such children are not ready for the tasks demanded.

Less commonly accepted, above the "first-grade," are differences in physical malnutrition and make-up. For example, some children do not have the visual skills necessary for reading until they reach seven years of age. Others lack the physical coordination needed for easy and fluent writing until they are nine or ten years old. Nor can all children attain the same proficiency in any one physical activity. Regardless of the level, setting up requirements which demand physical development beyond that which exists merely creates problems in attitudes and habits. Such

requirements are not taking into account physical readiness.

Mental Capacity. Mental capacity is significant in learning in that it helps to determine the quality and abstractness of thinking possible. Although the reliability and validity of any intelligence quotient may be questioned, the fact remains that a range in capacity does exist. All children in the ninth grade, for example, are not capable of understanding materials designed for the "average" ninth grader. There is no method, technique, or formula to make such readiness possible. In contrast, some ninth graders will have the ability to do college-level work.

Range in intelligence has other implications for readiness. If pupils cannot grasp certain abstractions, placing them regularly in situations which demand such thinking results only in failure. If differences in capacity have not been cared for in previous teaching, those children with intelligence indices at the lower end of the scale may not have learned as much as they could have. Since those with lower capacity learn more slowly and less than those with higher, an increasingly greater range in readiness as children grow older is to be expected.

Emotional-Social Factors. Emotional maturity and social adjustment are potent factors in readiness for learning. The pupil who is overly insecure, anxious, or fearful cannot attend to learning activities without his personal problems interfering. The one who lacks self-confidence, who is too dependent on others, who cannot accept responsibility may be defeated before he enters a classroom. Inability to respond to a teacher or to classmates without hostility and resentment, to share in the normal give-and-take in a classroom frequently results in aggression or withdrawal. Ignoring such children's lack of readiness produces frustrated unachievers with unhealthy attitudes toward themselves, others, and learning.

READINESS FOR READING

Readiness for an activity involving reading has two aspects: those in the reader and those in the material to be read. Since materials are selected for children, evaluations of reading readiness begins with the child.

Among the factors which must be considered in appraising a pupil's readiness to read, regardless of the level are: (1) a background of knowledge, (2) oral language facility, (3) achievement in reading, (4) a purpose for reading, and (5) a desire to satisfy the stated purpose by reading.

Background: A rich and varied background of information and experience is imperative for reading if a reader is to comprehend. Particularly is this true at the intermediate and secondary school levels where materials to be read are many and diversified.

A background of knowledge which includes well-organized concepts is basic to any reading, for there is no meaning inherent in printed symbols themselves. The reader attaches meaning, or concepts, to them from the background he possesses. When he has no appropriate concepts for a particular symbol, the symbol remains meaningless.

If, in attempting to read a selection, the reader lacks the knowledge he should have to understand the selection, he cannot read it successfully. Moreover, encouraging him to persist with little or no comprehension merely fosters verbalism. Without information, experiences, and concepts to take to reading, a pupil is not ready to read.

On the other hand, this aspect of readiness, in helping to guarantee comprehension, results in new knowledge acquired through the reading. By using and manipulating the information and concepts he has in reconstructing an author's ideas, the reader adds to what he knows by reorganizing his concepts, generalizing, and applying what he has learned.

Insuring adequate background cannot be relegated to a particular time of the year. It is a daily process. Even when a pupil has the basis for new learning, the appropriate knowledge must be called to mind by the teacher or the pupil himself, if he knows how.

Oral Language. Reading is a language process. In the normal sequence of language development, control of the spoken symbol precedes control of the printed symbol. Thinking precedes both. Insuring oral language facility as one element in readiness for reading has two advantages.

First, the thinking process that is basic to language can best be appraised and developed through speaking. Oral expression that is precise, logical, and concise indicates the ideas have been understood and organized. The problem of interpreting and evaluating an author's ideas is far more complex than thinking about and conveying clearly one's own. If thinking does not precede speaking, it will not precede reading; and reading demands thinking.

Second, a reader must have control over the concepts, the vocabulary, and the complexity of language orally at a particular level of difficulty before he can successfully interpret printed language at the same level. He must be familiar with unusual words or expressions before he begins to read. Otherwise he may read, as one child did, "to horse" as "two horses" with resulting confusion in comprehension. Adequate oral language facility is a prerequisite to reading comprehension.

Achievement. Readiness for reading a selection assumes a particular level of achievement. Each new learning depends upon previous learning. What a child has learned about the reading process in a second reader, he will need in the third reader. What a pupil has learned about these United States in the intermediate grades is basic to what he will learn in the junior high school.

Achievement at any level of difficulty in reading includes the two factors already discussed, i.e., a background of knowledge and oral language facility, plus the body of understandings, abilities, and skills necessary to reading for meaning. The latter is commonly organized into three categories: word perception, comprehension, and application. Basic to all of these categories is the realization that words stand for concrete objects, for ideas, and for feelings.

Word perception has two aspects: meaning and word form. Appropriate knowledge, previously discussed, results in the first. Ability to associate meaning to the symbol, which is basic to reading, and skills in recognizing and analyzing word forms are necessary for the second. Both aspects must exist to a suitable degree before a reader is ready to comprehend at a given level of difficulty.

The need for developing concepts has already been discussed. The ability to pronounce words correctly does not insure comprehension. Betty could say "fathoms," but she had no concept for the word. Since this was a key word, she was unable to understand the sentence. The meaning aspect of word perception is basic. Moreover, too many unknown concepts in material indicates lack of readiness for reading that material.

Ability to recognize or attack the word form itself is an index to readiness for reading a selection. Even the substitution of *a* for *the* affects meaning: "Give me a ball" is not synonymous with "Give me the ball."

Moreover, word recognition and word attack skills are developed sequentially. There is a state of readiness for the development of each one. When a child cannot hear the difference between consonant sounds, he is likely to have difficulty in (1) associating the correct sound with the visual symbol, the letter, and (2) using the consonant sound in attacking words. If he can't distinguish between long and short

vowel sounds, he won't be able to apply the "final *e*" principle in reading or writing. Common is the case of the pupil who persistently omits syllables in words. Upon analysis, it becomes evident that the learner cannot identify the number of syllables heard and frequently even omits them in speech. The student who is unable to use the dictionary may lack many of the background skills that are assumed mastered before he begins to learn how to use it. In each case, the learner is not ready for the advanced skill because he lacks one or more of the basic skills.

Comprehension. Readiness to comprehend necessitates all of the factors discussed in this paper. Particularly significant are the thinking processes, the necessary concepts, and the ability to see relationships between words in context.

Thinking is basic to comprehension, and the ability to think must be established before a pupil is ready to read. Likewise, a reader must have concepts with which to think if he is to comprehend.

A student must also grasp the meaning of groups of words such as are found in phrases and sentences. He must see the relationships between sentences in a paragraph and between paragraphs in a selection.

Nor is it enough that learners be ready to grasp just the stated facts in material read. They must also be ready to draw conclusions and generalizations, to contrast and evaluate, to sense tone, mood, and intent. These comprehension skills and abilities necessitate higher levels of thinking, or critical thinking. Readers must be able to think critically before they are ready to comprehend critically.

Application. Before a pupil is ready to use or apply what he has gained from reading, he must have a great degree of understanding, he must see relationships, and he must have control over the necessary skills and abilities. For example, in outlining from several sources read, he must first understand what was stated and

implied in the sources. He must see how the ideas fit together. He must be able to identify the main topics and the related, significant details. Finally, he must know how to set down these ideas in outline form. Until a pupil has the necessary understandings, abilities, and skills to do all these, he is not ready to outline from several sources independently.

Purpose. One element in readiness for reading is the identification of needs that can be satisfied through reading. These needs are the purposes for reading. Such motivation is intrinsic to the extent that the needs are actually learner needs, understood and accepted by the learner. Moreover the needs are recognized and stated prior to the reading.

Identifying a purpose for reading contributes further to readiness. It helps to insure reading for meaning in its fullest sense. It indicates whether the reading is to be a source of pleasure or of information. It dictates the depth of comprehension required and influences the rate of reading. In brief, the purpose establishes readiness by (1) identifying the "why" for the reading and (2) indicating the "how."

Interest. A desire to satisfy felt needs by reading is actually a product of all the foregoing factors. If a well-adjusted learner has a need that to him is worth solving, if he knows it can be solved by reading, and if his past experiences with reading have been successful, he will want to solve that need by reading. Needless to say, until this point is reached, he is not ready to read it.

MATERIALS

Thus far in this discussion of readiness for reading, the child has been the primary consideration. Some attention must be given to materials for reading.

Reading materials are selected in terms of the state of readiness of a learner. If a fifth-grader cannot read successfully a third level basal reader, he will be unable

to read a fifth reader. If a ninth grader is frustrated by a social studies text designed for and read well by the "average" seventh grader, he will be more frustrated by a textbook designed for the ninth "grade" level. When a high school senior sees no need to read a physics text, he is not ready to do so.

The difficulty of materials depends largely on: (1) the number, difficulty, and strangeness of facts, (2) the vocabulary, terminology, or symbols representing those facts, and (3) the context, or language setting, of the facts.

Materials in the content fields frequently pose problems for readers. Readiness has to be present to deal with the concise, all-inclusive, expository style, and the sentences filled with unfamiliar, difficult concepts and terminology.

The fact that such readiness is assumed to be present has contributed greatly to the problem of verbalism in the schools, i.e., to the number of students who "read" with little or no comprehension.

If all materials to be read were evaluated in terms of pupil readiness before they were used with learners, the many problems that exist in reading ability today could be reduced substantially.

CONCLUSIONS

From the foregoing discussion, the following conclusions may be drawn:

1. Reading readiness functions at all levels and in all learning activities.
2. Readiness for any reading activity is complex, made up of many interrelated factors.
3. Ranges of individual differences must be recognized and considered in readiness.
4. Readiness for reading must be insured for each student (1) if learning is to take place in a healthy situation, (2) if desirable attitudes are to be created toward reading, and (3) if adequate and efficient reading ability is to be developed.

Auditory Disabilities Related to Reading

Edward Pratt

Speech and listening activities are an integral part of the background of experiences which the reader brings to the printed page. For the beginning reader they constitute the background of *language* experience. Many abilities relative to receiving and expressing ideas through language symbols are established in the preschool years. Reading requires the use of these abilities to interpret visual, rather than auditory, symbols. Auditory abilities and disabilities with respect to language will be important influencing factors as reading ability develops.

NATURE OF AUDITORY DISABILITIES

To make an effective response to oral discourse, the ear must be able to receive the stimuli, there must be ability to differentiate among stimuli, and there must be ability to interpret the stimuli that are received and identified. Disabilities can result in relation to any of these elements of auditory perception.

Hearing acuity which will enable the individual to receive sounds in the frequency range of spoken language at the intensity level used in ordinary speaking situations is essential for effective participation in oral language activities. H. Davis indicates that the most generally accepted estimate of the percentage of school children suffering some degree of hearing loss is 5 per cent. A large portion of those suffering some degree of hearing loss show an average of 20 decibels or less loss in the speech

range. If the hearing loss is no greater than 20 decibels, hearing for language purposes is not greatly affected. Apparently, if speech symbols can be distinguished by the hard-of-hearing, their responses to those symbols can be similar to the responses of those who hear the symbols at a lower level of intensity.

Disabilities in the identification of basic speech sounds and pronunciation units may result from poor auditory discrimination in listening situations and poor articulation in speech situations. Sound elements may be confused unless the auditor is able to detect nice differences among these stimuli. As we attempt to speak, articulation and enunciation may be inaccurate. This inaccuracy may, or may not, affect auditory discrimination. At an early age we establish a pattern of behavior for identifying and using spoken language symbols. Our response may exhibit careful auditory discrimination, articulation, and pronunciation, or it may exhibit slovenly and inaccurate practices in regard to these abilities.

The third grouping of auditory disabilities is associated with interpreting or comprehending spoken language. In addition to identifying the pronounced words, we must be able to make certain responses in the listening situation if meaning is to be developed. These responses would include such skills as being able to infer relationships that are not specifically stated; being able to perceive main and subordinate idea

relationships; being able to perceive the sequence of happenings in a story; and being able to react appropriately to the oral presentation. As in the case of symbol identification, habits are formed as we attempt to interpret spoken language; and disabilities may result.

RELATIONSHIP OF AUDITORY DISABILITIES TO READING ABILITY

As previously stated, speech and listening activities constitute the background of language experience for beginning reading. Listening and speaking ability do not insure success in the development of reading ability, because the skills of reading represent an entirely new area of learning to be mastered. The person who listens well and speaks well has a good language background for reading development. Inadequacies in speaking and listening indicate deficiencies in the language background which are likely to be reflected in the development of reading skill.

Persons with a hearing loss of 35 decibels or more are likely to be somewhat limited in the language background they bring to the reading situation. The ability to differentiate among spoken language symbols and the ability to interpret spoken language symbols will be affected by such a handicap. If these limitations are present, the general language background for reading will be adversely affected. A decided hearing loss may cause the individual to become socially and emotionally maladjusted which would also tend to affect progress in reading.

The degree to which identification and production of speech sounds affect the development of reading ability is partly related to the methods used in the teaching of reading. If phonics is emphasized as an important aspect of independent word identification, these oral language skills will have a direct bearing on reading development. If phonics is not stressed in the teaching of reading, identification of speech sounds will still have an important

effect, since disabilities will influence the size of the speaking-listening vocabulary.

Phonics enables the pupil to use his knowledge of pronunciations and ability to hear the basic speech sounds in the independent identification of the word symbols used in reading. Inability to discriminate between the initial "f" and initial "v" sounds would lead to confusion on the words "very" and "fairly." Other difficulties of a similar nature may occur as he attempts to associate sounds with letters. Substitution of the "t" sound for the "s" sound in the initial position in spoken words may cause difficulty in phonics with such discriminations as "tow and so, tack and sack, Ted and said, and tick and sick." Donald D. Durrell and Helen A. Murphy have presented experimental evidence which supports the contention that practice in discriminating sounds in spoken words is valuable training in relation to reading instruction. Training of this type is essentially an attempt to obviate auditory disabilities that have been developed by the individual prior to reading instruction.

In the early stages of reading instruction, the speaking-listening vocabulary provides two of the three elements in word identification. The pronunciation and meaning are known, and the reader must make an association between these known elements and the visual word symbol. As the reading vocabulary grows we experience a need for identifying printed words for which we do not have a pronunciation and meaning, but even the mature reader is able to identify many words in reading material that he has heard in meaningful spoken context.

The effect of listening comprehension disabilities on the ability to develop meaning in reading situations has not been determined by research. A close relationship has been indicated, however, in terms of correlation and basic abilities. Many studies have reported high correlations between reading and listening. Representative of

these correlations are the .51 to .56 reported by Robert Hall, the .64 reported by Lloyd E. Pratt, and the .80 reported by William E. Young. The abilities needed for reading comprehension have been treated in the professional literature for a number of years, and the abilities needed for listening comprehension have also been reported in recent studies. Comparison of these abilities reveals that most of the skills are common to both language reception modes.

Regardless of whether or not a one-to-one relationship between reading comprehension and listening comprehension skills can be considered a tenable hypothesis, participation in listening activities does provide a background of experience in the interpretation of language symbols. The effectiveness of listening comprehension will determine the quality of concepts developed in language experience, and the variety of these experiences will affect the range of concepts available for related reading experience. If the listener is unable to develop essential comprehension skills, this mode for language experiencing has been limited; and other language experiences will be affected.

EVALUATION AND REMEDIATION OF AUDITORY DISABILITIES

The evaluation of hearing acuity has importance in relation to reading and in relation to general language development. Teachers should become aware of symptoms of hearing loss; but in many cases these symptoms may be associated with other causations (i.e., low mental ability and lack of interest, etc.). If possible, adequate information should be obtained through the administration of audiometer tests. Observation and other uncontrolled evaluation processes fall short of desired effectiveness for screening as well as for precise determination of hearing loss. Audiometer tests should be repeated at intervals to locate disabilities of recent origin.

If persons with moderate hearing losses

are to remain in the regular classroom, training in lip reading and speech should be provided by the teacher or a specialist. Teachers should also adjust the seating to compensate for the hearing disabilities.

Auditory discrimination of initial consonants is commonly evaluated in reading readiness tests. It should also be evaluated at later stages in relation to other phonics elements, structural elements, and pronunciations derived from the dictionary. The individual who is able to hear the likenesses and differences in initial consonants can probably be led to make other auditory discriminations, but this should not be taken for granted. Most diagnostic reading tests evaluate abilities related to visual discrimination, but do not check auditory discrimination.

Some diagnostic tests designed for use with specific basal readers do evaluate auditory discrimination of word analysis elements introduced in those readers. Teacher-made tests are valuable in diagnosing specific disabilities.

When specific disabilities in auditory discrimination have been diagnosed, related instruction should be provided. A prerequisite for working with sound elements, pronunciation units, and accent is the ability to hear them in words. Instructional procedure in re-teaching should be similar to instructional procedure in initial teaching. Listening for the specific sound should come first, followed by discrimination between the given sound and other similar sound elements.

Standardized tests which evaluate some aspects of the ability to interpret oral language are available. On the elementary school level the Durrell-Sullivan Reading Capacity Tests evaluate the ability to identify meanings for pronounced words and certain abilities associated with the interpretation of paragraphs read orally. The Brown-Carlsen Listening Comprehension Test is useful at the secondary school level.

In a study designed to evaluate a program for the improvement of listening in

grade six, Pratt reported a significant gain in favor of the experimental group which received instruction in listening. The instruction provided in this experiment involved lessons related to specific listening comprehension skills. Additional research

is necessary to determine the validity of relating reading comprehension skills to listening comprehension skills for instructional purposes. However, increasing listening ability will improve the language background for reading activities.

18

Individualized Teaching of Reading*

Jill Bonney and Levin B. Hanigan

Generally, children in a classroom are grouped for instructional purposes. This procedure usually results in a minimum of three reading groups corresponding roughly to good readers, average readers, and poor readers. But there are times when every child needs special attention. Within these groupings there are children who do not exactly "fit," as many teachers express it. They may be either a little slow for the group, but not slow enough for another group, or they may be approaching the next highest level, but not quite good enough to fit into that group. Also, children within each group have a wide range of interests.

The individualized teaching of reading, with emphasis upon the children's individual interests and levels of development, is designed to meet these needs. It is a developmental program with specific aims and definite procedures. Reading is taught fundamentally as well as incidentally. The information that follows reflects the questions of classroom teachers who have discussed the program in staff meetings and workshops.

BASIC PHILOSOPHY

Several ideas lie behind the individualized approach to teaching reading. Together they form the basic philosophy of our program.

Reading as an Individual Skill. Reading is fundamentally an individual skill and, as such, can best be learned when instruction most nearly meets the individual's needs. This process does not eliminate all group procedures; instead, it increases the number of groups. It necessitates that groups be flexible, temporary, and formed for teaching a particular skill or for sharing ideas gained from reading.

Pupil-Teacher Rapport. The success of this program depends primarily upon pupil-teacher rapport. The child needs to understand that the teacher is eager to help him at all times. He also needs to understand that the teacher is sympathetic, interested, enthusiastic, and not unduly critical of his weaknesses. Teacher and pupil together must discover weaknesses and strive to overcome them. This quality of rapport applies not only to the mechanical processes of reading, but also to other phases of the reading program, such as the selection and evaluation of reading material, the or-

* *The National Elementary Principal*, XXXV (September, 1955), 76-82.

ganization of reports, study skills, and leisure-time reading.

Teacher as a Guidance and Resource Person. While the teacher's primary responsibilities are (a) to develop a desire in children to want to read and (b) to teach them the skills to fulfil this desire, the individualized program of instruction places the teacher more emphatically in the role of a guidance and resource person than he has been heretofore. He moves about the room listening to children read, helping them with problems in their reading, noting difficulties that will need further attention, discussing concepts and understandings, and conferring about materials.

All Must Understand Objectives. None of the objectives stressed in other methods of reading instruction can be sacrificed because an individualized approach is used. Rather, these objectives are more strongly emphasized. The basic skills (listed in any good textbook on reading) receive as much, if not more, attention in this program than in any other.

However, beyond the conventional skills phase of the reading program, the individualized approach achieves additional desirable objectives. It inspires the child to read, provides broader reading experiences, instils an appreciation of fine literature of all types, develops a spirit of self-evaluation, develops an ability to evaluate literature critically, and enables children to progress at their own reading levels more satisfactorily.

The achievement of these objectives depends to a great extent upon how well teachers, pupils, parents, administrators, and supervisors understand the objectives and how hard they strive to attain them. The program will be hampered without such a cooperative approach based on mutual understanding.

Reading Materials. Reading should not be confined to basic readers but should embrace all kinds of materials. Many sources will be available to children in their everyday contacts.

Evaluation. Evaluating the results of a reading program is part of a basic philosophy of reading. The individualized approach seems to offer greater opportunity to measure the child's progress in reading, for, in the final analysis, growth in reading is an individual matter to be assessed for each child.

Open-Mindedness. Any philosophy must admit experiment. Thus, no one method of teaching reading is best for all pupils at all times. As teachers become more experienced in the individualized approach, they will find better ways to adapt the program to their own abilities and to the abilities of their pupils.

These principles, then, form our basic philosophy of the individualized approach to the teaching of reading. They are the foundation of the detailed activities described in the remainder of this article.

PREPARATION FOR THE PROGRAM

Extensive preparation and organization are required for the launching of a program. These requirements refer particularly to the classroom, the parents, the materials of instruction, and to the supplementary personnel.

The Classroom. As has been suggested, the individualized approach demands that the classroom teacher establish a good working relationship with the students. The children must realize that the teacher is there to help them with their difficulties, so that they may become better readers and have a more fervent desire to read.

Having a part in planning the reading program is vital to this wholesome working relationship. Some items that the children can help plan may include agreeing on the time for reading, setting up a book display, establishing a procedure for checking books in and out, securing books from the school and public libraries, caring for the library tables or the library corner, deciding on methods of evaluating materials read, developing procedures for keeping records of materials read, and selecting stu-

dent helpers who may assist other children with their reading problems.

If the children are to feel responsible for a good reading atmosphere, the teacher should guide them into asking such questions as: Why do we want to read? Is it quiet enough for good concentration? How do we know when a book is too difficult? How can we help ourselves to become better readers? Pupil participation in answering the questions will help to stimulate the program.

The Parents. Parents, like the children, participate more effectively in a program which they understand and approve. The teacher should explain to them his basic philosophy of teaching reading and seek their cooperation in securing suitable reading materials. In addition, the teacher should encourage parents to visit the classroom so that they may better understand what the teacher wishes to accomplish. Informed parents can be strong supporters.

The Materials of Instruction. Many and varied reading materials are essential to this type of program. Immediately the question arises, "Where does one get enough materials?" Procurement is not nearly as difficult as it may seem. Parents usually are quite willing to contribute reading material, if they know what is desired. Many public libraries will allow a teacher to sign out from 25 to 30 books at a time under his own name, and the children can obtain books on their own library cards. Also, well-stocked school libraries are important.

Resource materials, such as encyclopedias, science books, and social studies books, help children to understand that they read for many purposes other than pleasure or entertainment.

In the lower grades, stories about the children and their daily experiences may be reproduced on charts and used for reading purposes. These charts may be tacked on the walls, made into class books, kept on an easel, or preserved by some other method for ready reference.

The children themselves may produce exciting reading materials. Their stories and reports may be bound with cardboard, decorated appropriately, illustrated attractively, and placed in the room library.

The children may work to more advanced levels as authors. They may become proofreaders and produce stories that are relatively free of grammatical errors and high in interest level. This type of material often has a much greater appeal because the experiences are personal ones told in words that most children comprehend readily. Sometimes these books may be put into the school library for other children in the school to read.

The Supplementary Personnel. The librarian of the school plays a very important part in this type of reading program. Through frequent conferences with the classroom teacher, he soon becomes aware of the types and levels of books that are desired by a particular child. The librarian will often point out to the child a book or magazine article in which he thinks the child may be interested. The cooperation of the librarian also helps to provide a room library that may be changed from time to time. These books are attractively displayed to arouse interest.

Story telling may be another contribution of the librarian. Assisting in this activity from time to time may be parents, community members, public librarians, other children from the school, the principal, or other school personnel.

At times, authors of children's books may stimulate reading thru their correspondence or personal visits to the school.

TEACHER AND PUPIL ACTIVITIES

After the classroom teacher has secured materials on all levels, he displays them in a convenient and attractive manner. Then he sets up a plan of organization with the children which will permit each one to choose the material that he wishes to read. As the children read, the teacher is free to

help them with words that they may not know. Usually, extended instruction should not be given at this time in order not to interrupt their thread of thought. However, there are times when immediate attention will gain greater results, depending upon the child and the type of instruction needed at the time.

The teacher may sit with different children and listen to them read aloud the portion of the story that they have been reading silently. At this time, the teacher will note children having similar difficulties in word analysis, word meaning, the understanding of ideas, oral expression of ideas, or other skills generally emphasized in any reading program. The teacher need not listen to every child read every day in order to know who needs help.

At a satisfactory time, the teacher may want to call together a few pupils who are having difficulties. It is in these small groups—always flexible, as some pupils may need very little help and others a great deal—that the greatest amount of time is spent in teaching the basic skills. At times, individuals are helped in the same way.

As the program progresses, children learn that the teacher is willing and anxious to help each child with his individual difficulties. Each child receives this help without criticism or stigma, and he responds to the teaching. Thruout this process, reading for meaning, rather than reading to pass tests, is emphasized.

The total reading period is approximately 50 minutes long. Part of this time is spent in checking and extending comprehension. There are many interesting ways to do this other than just having a child read aloud or answer questions asked by the teacher. One of the most frequently used methods is having the child simply tell his story to the entire group or to a small group who may be reading out of the same book or to those who have been reading about the same subject. Another way that the pupil may show that he has

comprehended what he has read is by trying to "sell" his book or story to the group. Or a reader might tell his story as it appears to him in a make-believe crystal ball—similar to the line put out by a fortune teller. Sometimes the children may desire to illustrate, dramatize, or sing what they have read. We believe that if a pupil can tell his story accurately thru these several mediums, he has comprehended the material.

The classroom teacher contributes to stimulating interest in reading through recommending books, reading parts of books, poems, stories, and other interesting materials, telling stories, arranging attractive book displays, and other similar activities. From all of this encouragement, pupils develop a wider and more intense interest in children's literature.

EVALUATION

The most commonly used types of evaluation are teacher and parent observation of children (particularly in regard to the kind of material selected, the amount of material, the difficulty of the material, the amount and kind of help needed to read successfully, and the reaction of children toward the material read), oral reading, creative writing, discussions of material read, standardized tests, teacher tests, informal inventory using basal readers, and the observed desire of children to want to read.

The reactions of children themselves are necessary to complete an evaluation. A few typical statements of pupils follow:

I like our reading period because I can read more and better stories. I don't like it because I get so interested sometimes that I read when I shouldn't.

Reading is more of a pleasure to me. I get books I really enjoy reading. It was never interesting listening to others read and missing lots of words.

Since I get more help from the teacher, I work harder myself.

THE INDIVIDUALIZED APPROACH

We believe that the individualized approach to teaching reading merits consideration by other elementary-school facul-

ties. First they may wish to experiment with it and then they will know whether or not to extend it thruout the school.

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An Individual Program of Reading*

Phyllis Parkin

In June, a group of 36 eight- and nine-year-olds, labeled "Fourth Grade," completed a year's program in reading under a highly individualized method. The children, who had been introduced to the program the previous September, took to it like the proverbial ducks to water. The boys and girls read eagerly and prodigiously. They read for fun; they read for information. They read alone; they read together. Most of the pupils chose wisely and read widely. (One girl read 147 books.) They grew in their ability to have fun, find information, weigh comparisons, and draw conclusions. In short, they learned to make good use of what they read. Their reading was dynamic and functional.

When these boys and girls were asked which they liked better, group reading or individual reading, their reply came in a chorus, "Individual!"

The next query, "Why?" brought the following comments:

"I like individual reading because I can choose any book I want to read."

"I like this kind of reading because I can read as fast as I want to."

"Last year, everybody knew I was in the second reading group until I got good enough to move into the highest one. This year, no one knows what group I'm in because there aren't any groups!" (This conclusion was accompanied by a smile of satisfaction.)

"I like individual reading especially because I don't have to wait for anyone else to finish a story before I can go on to a new one."

"This kind of reading is more fun because I can find out what I want to for myself. I don't have to answer questions that someone else makes up."

"I like individual reading because the teacher doesn't pass out books and say, 'Today we're going to begin to read this book together.'"

"The reason I'd rather have individual reading is because I can ask a friend to read with me or I can read alone if I'd rather."

"I like to hear about all the books the others are reading. That helps me to choose my next book sometimes."

"In this kind of reading, the teacher just helps those who need help. The rest of us don't have to learn over again what we already know."

* *Educational Leadership* (October, 1956), 34-38.

If only these thrilling testimonials had been caught on a tape to preserve the conviction and the excitement in the young voices! Many teachers and supervisors considering an individualized reading program seem to feel that these benefits mentioned by the children ought to result. Doubts often come pouring into their minds, however, to water the courage it takes to launch such a program. Here, "out of the mouths of babes," tumble words of sincere testimonial that should give them courage.

WHAT IS NEEDED?

Just what is needed to start an individualized reading program? First, *children* who want to read better and a *teacher* who wants to teach them to read by the best method she can devise. The teacher should be willing to give the individualized plan of reading a fair trial with her children. Although the children will be happy for such an adventure, the teacher may be bothered by the uncertain feeling of not knowing all the answers in advance. There is no set pattern to follow; she must work one out as she goes. But she should have no fears. The children will help the teacher even as she helps them.

A second "must" is a supervisor who approves and encourages the teacher in undertaking this kind of program. The teacher probably has not used this method before. There is no teachers' manual to follow. The program, at least at the beginning, is bound to be of an experimental nature. The teacher's greatest asset is an understanding person who can help her evaluate the progress she is making under the new plan, whether this person be principal, supervisor, or administrator.

In the third place, a wide variety of reading materials must be available. This factor alone may make or break the adventure into individualized reading. In all probability, there will be on hand basal texts, supplementary readers and library books. In addition, assiduous use must be

made of the public library, the bookmobile, of every possible source of books in the community. Parents, too, are usually willing to allow their children to share their books at school. Five books per child is perhaps a rough estimate for which to aim. These should range in difficulty according to the spread of abilities in the group of children using them. The assortment will include, in addition to those mentioned before, texts in the various subject matter areas such as social studies and science as well as numerous story books, easy and difficult, just for fun. There must be something to tickle everyone's taste. The selections should be changed from time to time with care being taken to retain those that some children are still looking forward to reading. At the time of change, books may be found to satisfy the particular needs or choices of certain children. As we well know, some children will read anything but some are "choosy," and it is the teacher's job to satisfy them all while at the same time she is trying to help the fussy child broaden his reading horizon.

HOW TO BEGIN

With teacher, children, and supervisor in the mood, and with a reasonably good supply of books of varying difficulty and diverse interests, how shall the program be initiated? This is perhaps the most imposing barrier of all. Once hurdled, however, it soon shrinks away to nothing.

There is no right or wrong pattern. Here is the way one teacher did it. At the very beginning of the year, before any type of program was under way, she told the children that this year reading was going to be a little different. She explained that there would be no reading groups as such and that each person would choose his own book and read it as he was able. She talked with the pupils about choosing carefully and planning to finish the book begun. She also told them not to scorn a book that looked easy because in doing so

they might cheat themselves out of a good story. (This suggestion was made with the idea of lifting pressure from the slow reader who needed to choose an easy book to read.)

The teacher further explained that, instead of calling groups of children to read with her every day, she would stop by to talk with each child about the book he was reading or to ask him to read to her. She would always be present to answer questions or to help in finding a book. From time to time, she would bring together children who needed the same kind of help and work with them in a group; this group would not remain the same, though, from one day to the next.

She asked the children if they thought it would be a good idea to keep a list of the books they had read so that at the end of the year they could see what they had accomplished in reading. The boys and girls agreed and decided that this list should contain the title of the book, its author, and just a brief summary or comment about the content.

By way of pulling together this plan and setting the project in motion, the teacher asked, "From our discussion this morning, what different things do you see that you might be doing during our reading time?" As the children replied, she wrote on the board:

1. *Choose a book to read.*

2. *Read.*

3. *List the book in your notebook.*

If a child already had a book to read at his desk, then he had no reason for going to the shelves for another. Other children, however, went a few at a time to select a book to read. On that initial day, a majority of the children settled down to serious reading. A few were restless, however, and needed help in choosing something suited to their interests and abilities. One child simply could not find anything he liked. Here was a challenge for the teacher, to find the right story for the "choosey" child.

Perhaps no child would be ready, the teacher thought, to list a book completed on the first day. On the contrary, several rapid readers chose attractively packaged "easy" books and had several to list during the very first period.

As the year went on, teacher and children found other activities that belonged in the reading period. One by one, the following were added:

4. *Read together.*

This came to mean one of two things: either two or three children sat together just for the sake of companionship, each reading his own book; or two or more children read together from the same books by taking turns reading orally or by "playing parts."

5. *List new words and their meanings.*

The word list and functional use of the dictionary developed naturally from the often-asked question, "What does this word mean?" The readers of more advanced material began this phase of their reading earlier in the year and, of course, went much further with it than the slower readers. Some children became fascinated with words and spent a good deal of time in word study.

6. *Share the books you read.*

By this, the children meant describing a particular book to their classmates. A favorite method was that of telling an exciting adventure or leading up to a point of suspense in the story so that half a dozen children would be begging, "May I have the book next?"

Another trick the children developed was to describe an incident or a character and ask if anyone could identify the book from the description. Some children gave a brief oral review so that a child seeking a particular type of book could tell whether this suited his taste.

Some very fine experiences in story telling, building suspense, summarizing important points, and in listening came out of this phase of the reading.

7. *Do something with what you read.*

Sometimes a story or a part of a story offered excellent material for dramatization and a child would take charge of a group for such a project.

Many times the book being read had information needed for a report or for use in other ways. Gerald needed tracing paper to get the pattern for a simple wagon he found described in a make-it-yourself book. Then he took down the directions to use at home. Diane drew illustrations of incidents or scenes that stirred her. Donny loved birds and took down information he wanted to put in his illustrated bird book. Dennis would tolerate nothing but trains for a while and he listed certain facts he wanted to keep. April and Susan found a vivid description of an oasis which impressed them so they transformed the word description into a diorama. These youngsters and many others actually put reading to work for them.

The time set aside each day for reading grew from twenty-five minutes in September to more than an hour in June and often started out with a listing together of these seven activities. These seldom appeared in the same order but each child would be engaged in one activity depending upon which stage he had reached at the time. One item never came out on the list, perhaps because it was simply taken for granted: *Get help from the teacher.*

An individualized reading program provides a very great advantage. Children learn to read by reading. In this program, therefore, each child can do something about his own reading during all the time set aside for reading. He is also at liberty to continue his progress in any free time he has at home or at school.

TEACHER'S RESPONSIBILITY

It is obvious that in this type of program there is a shift in emphasis in the teacher's responsibility. Instead of calling a group of children around her so that she may teach them all the same thing whether they need it or not, her duties are

somewhat different. She must know what books are on the shelves and she must know enough of their contents so that she will be able to advise the children in making their selections.

She must never lack the time to encourage and actually teach the slow worker. She must never fail to inspire the gifted reader to more effective use of his reading potential. Phonics is not omitted from this type of reading program but it is given only as it is needed, not as a routine procedure for everybody. Each day, the teacher should work with as many children as possible, talking with them, reading with them, noting their difficulties. From time to time, she will group those with similar needs for specific help. Actually, she does all the kinds of teaching she would do under the group system but only for the pupils who need such help. Thus the teacher can permit other pupils to go on in their reading, never stopping until they get tired or come to some situation they are unable to handle alone.

EVALUATION OF LEARNING

How can a teacher ascertain whether her children are learning to read better by this method? This seems to be the chief concern of those who are considering a more individualized approach.

In the first place, the teacher need not be too concerned, for example, about the nine-year-olds who are reading from the short stories of Oscar Wilde and *The Story of Fission*, except perhaps to ask, "Am I providing them with plenty of stimulating reading material?"

Then, there are certain gains she cannot help observing: freedom of choice and the joy that accompanies it; release from the tethering gait of the group; release from the stigma of the group label; a relaxed attitude toward reading; the pleasure of making reading a live, dynamic activity; more time for reading for the

ciency of instruction especially when the practice of automatic promotion enables the child to terminate his reading instruction before his achievement has reached his grade level requirements. Increased enrollments, lack of experienced teachers, and conflicting theories on the teaching of the subject have all contributed to the problem of providing the desideratum in reading instruction. Occasional inadequate early training, the consequent lack of motivation, differences in native ability, interest variations, various emotional needs, and lack of varied reading materials adapted to the reading ability of the individual child combine to render the administration of reading classes challenging, certainly, but also frustrating unless the teacher can be made to feel that all these factors are being adequately handled.

David H. Russell in his book *Children Learn to Read* presents an analysis of specific components which enter into the problem of the individualization of reading and classifies these factors according to the grade level at which they are to be found. The substance of what he says, as found applicable to the junior high school grades, would indicate that the teacher of reading at this level should be especially alert to provide for differences such as these:

1. Ability to make contributions to group experiences
2. Variations in background experiences necessary for understanding printed materials
3. Wide variations in reading and speaking vocabularies
4. Interest in learning to read more effectively
5. Deficiencies in oral reading skills
6. Ability to associate concepts with printed matter
7. Ability to read printed matter for specific purposes
8. Ability to do independent work
9. Inefficient reading habits
10. Knowledge of sources of information

Effective reading instruction must begin with the acceptance of the fact that reading is a form of thinking and thinking is a highly personal process. Upon this premise, and having for its objective specific provisions for the ten areas in which individual differences were found to be most prominent, a planned effort to individualize reading instruction was inaugurated at Riverside Junior High School in Fort Worth, Texas, with the encouragement and cooperation of the principal.

The program described here was carried out without resorting to experimental classes or disrupting the general reading curriculum as prescribed by the local school board. What was altered was the type of preparation on the part of the teacher and class procedures.

All seventh-grade students at Riverside Junior High are grouped as homogeneously as possible on the basis of past performance in their school work.

This makes it possible to conduct satisfactory work with a minimum of class division or grouping. Usually two was felt to suffice. However, on the basis of the results of the Nelson Silent Reading Test, all of these homogeneous classes did reveal wide ranges of ability, often as much as four and even five years. Efforts to meet individual differences by means of grouping beyond three would make the class progress slow and burden the teacher unduly. Hence, some means had to be developed whereby the grouping could be made flexible without rendering the method of class management a greater problem. The solution was sought in the direction of standardization of class procedures according to the ability level of individuals rather than that of general groups, and scaling progress according to the ability of the individual student to advance rather than according to the average progress of a group. This would solve the problem of grouping as well as individualization and leave the teacher free

Assignment One and to Key One. In this way class time was saved in making assignments because the book proper for each child was determined from the Nelson Silent Reading Text and the assignments for the chosen text were given the child on a typed sheet. The child was expected to use the answer sheet given him at the same time to enter the answers to all questions for all tests. (See Sample Answer Sheet.) Since the tests were all keyed to one master Key, this sheet served any text that might have been assigned.

An attempt to evaluate this completely individualized class procedure was made by conducting two classes of comparable ability with the two methods here described. In one class, the students were divided into the two groups which are most effectively handled by the average teacher, and the basal texts adopted by the local school board were used. Stories were assigned daily, and reading both oral and silent followed. Tests on the units and individual stories were taken, and grades assigned accordingly. The same teacher worked with the second group, employing the standardized assignment sheets and tests described. Both classes were given the Nelson Silent Reading Test at the beginning and at the end of the year. The first class covered two basal texts in the course of the year, while the second class averaged better than three, but the difference between the two classes was most striking in the average growth for the year as measured by the Nelson Silent Reading Test given at the end of the year. The first group made an average of nine months' growth, which would indicate satisfactory growth, but the advancement of the second group better than doubled that of the first.

The class procedure in the case of the individualized group was not as complicated as that of the first group. Each child had his own assignment sheet and text. The child read each assignment in order and completed his notebook assignment

on the story, which consisted of a notation of the title of the story, the author, the student's own list of new words learned, and a summary of the assignment covering the setting, main characters, a few sentence précis, and reading purpose. Then the student secured the proper test for his assignment from the file, took his test, and corrected it. He entered his score on his assignment sheet and began the next assignment.

Oral reading practice was provided in the reading of plays by the class and private readings to the teacher. Group participation was not stressed because it was felt that this was provided in other cases such as social studies. Since each student had his own work cut out, the teacher was completely free to move about the room inspecting work, giving suggestions, and answering individual questions.

General testing for report card purposes was not difficult because frequently the class procedure was interrupted for the reading of a special selection by the entire class. The common assignment provided a basis for grading for report card purposes in which relative class standing was a consideration.

The original number of texts available to this individualized program was eleven. That number has since been increased to twenty-three. Reading materials are available for assignment in a number of subject fields such as social studies, history, geography, literature, and science. Integration and the formation of life ideals are available in the form of biographical assignments. Articles on current events are available in the form of assignments from *The Reader's Digest*.

Features of this reading program which make it readily adaptable to any school or grade level are:

1. *Adaptability of assignments to meet individual needs.* Because assignments are standardized, they can be selected by the teacher quickly as a remedy for any deficiency found in the child. Variety of

assignment material enables the pupil's interest to be used at a reading level in keeping with his ability.

2. *Standardization of keys to all tests in all texts.* This enables the teacher to check all work himself or allow the student to evaluate his own work with all the advantages that accompany a self-scoring program. This also allows more time for actual reading work because no time is consumed in class for correcting and returning papers.

3. *Wide variety of reading materials.* Allows the child to grow and develop in more than one area in the course of the year because, after completing one basal text for his grade, he progressively develops the ability to cope with more difficult materials and acquire knowledge in special subject fields in which he may need additional help. This is especially true in the fields of social studies, geography, and history.

4. *Self-conducted classroom procedures.* This frees the teacher almost entirely for individual consultation and guidance of students while working at their respective assignments.

5. *High motivation value.* Students feel a sense of accomplishment in completing individual assignments as they reach the total number of assignments on their assignment sheet on which they record their scores. These scores often show increases from day to day. The prospect of another book with stories or types of reading material of special interest to a particular student offers an incentive to complete the present sheet. This prospect is especially valuable to a child who must complete an assignment sheet which may not have the highest rating of the child who may need it most. Too, the individualization of the work situation is often new to the student of this age and is flattering to his self esteem because he feels capable of independent work. The spirit of competition between students is present but not to the extent that a slow student will be embar-

rassed since each student reports his progress and score to the teacher individually while he receives advice and direction.

6. *Removes grouping problems while achieving the same ends.* The difficulty in traditional grouping lies in the fact that the teacher remains one while the differences between students increase the longer the course lasts. The ability to handle more than two groups in a single class is not possessed by many teachers, yet it is not unusual to find several levels in a class. This method provides for the most natural grouping at the outset and allows for flexibility in regrouping as the better students develop faster than slower ones.

7. *Removal of discipline problems.* In so far as the teacher can keep a child constructively occupied with interesting learning materials, he can reduce discipline problems in a natural way. Once the child understands what he is expected to do, his activities are meaningful to him. Because of the variety of materials available and the fact that they are within the ability range of the student, the interest of the child is easily maintained. The child comes to anticipate the class because he enjoys the work specially tailored for him and the feeling of accomplishment it affords. Teacher motivation from such a class cannot be overestimated or overvalued. Such cooperation from students inspires the teacher who also derives greater pleasure from his work, and his enthusiasm affects the entire classroom situation.

8. *The program actually meets individual differences, not group differences.* The individual is the basis for the class conducted in this manner. Groups result only incidentally and dissolve as readily. The needs of the individual are met directly and personally, therefore effectively, because the teacher is free at all times to direct his attention to the needs of any specific student at any moment.

9. *Objective measurement of individual progress.* Progress of individuals is meas-

ured in terms of increase over the score made at the beginning of the course in the Nelson Silent Reading Test. Final measurement of growth is measured by an alternate form of the same test. At intervals between these, other standard tests are used to measure as objectively as possible progress to date.

10. *Record keeping is kept at a minimum.* Records of themselves are useless as a teaching method. Records of grades made on individual assignments are all kept by the student on his record sheet. On this sheet every answer to every question on every test of every assignment is kept in a minimum of space and easily available for securing an over-all picture

of the student's work. In special cases, this profile of the child's work will indicate to the teacher specific needs or unsensed interests of the child because, since the assignments are standardized, variations in scores are easily traced to specific elements in particular assignments.

The results of this project at Riverside Junior High to date have been most gratifying. With increased refinement of the tests already formulated and the added insight that comes with experience in the administration of the program, there is every hope that we are making progress in the direction of providing our students with a truly individualized reading curriculum.

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Some Issues in Grouping for Reading*

Dan T. Dawson

Ironically, any discussion of issues in grouping seems to raise *more* issues than it settles. One thing, however, seems certain: grouping in some form is here to stay. Before a discussion of specific issues, a brief examination of the background from which grouping practices have emerged seems desirable.

BACKGROUND OF GROUPING

In 1916 following the revision of the *Binet* scale by Terman and extending to the present time, there has been great interest in and study of individual differences—differences in academic aptitude, differences in physical growth rates, dif-

ferences in emotional development, and differences caused by varying socio-economic backgrounds. Research in these fields has produced height and weight norms; averages such as Olson's "organismic age"; tables of age-grade norms for achievement tests in reading, arithmetic, and other subjects; and, more recently, statements of developmental tasks appropriate to the various age levels.

Revisions of the *Stanford-Binet* during the 1930's brought sharply into focus the great range of individual abilities and aptitudes of children. For example, these revisions indicated that in a random group of first graders, the middle 55 per cent would fall within a mental age range of approximately four to eight years. At age

* The National Elementary Principals, XXXV (September, 1955), 48-52.

12 this mental age range had approximately doubled, from eight years to 16 years. Similar variation has been shown in the reading test scores and arithmetic test scores.

Two Generalizations. From these studies by child psychologists and educators two generalizations can be stated. First, the higher the grade level, the greater the range of differences within a class. For example, a teacher with a typical first grade will need to deal with a reading age range of three to four years. A teacher of the sixth grade in the same school would expect to deal with reading abilities ranging over a span of six to eight or more years.

A second generalization related to the first is that the better the teaching-learning situation, the greater the range of individual differences becomes. This means that a rich reading program consistently developed in the first, second, third, and fourth grades will aggravate the problem of instruction in the upper grades—the problem of coping with the divergent levels of ability.

Caring for Individual Differences. Education's answer to the problem of individual differences has been the development of a variety of grouping practices. Historically the teacher of the one-room school has always accepted the fact that he had to provide a variety of materials for instruction. There was no other way to cope with the problem. Sometimes the problem was solved by individual assignments and books, sometimes by having very small groups work together.

On the other hand, teachers and administrators in the larger, urban schools of many children in a grade have been ingenious in devising ways to circumvent the fact so readily accepted in the one-room school. The literature in reading is filled with studies on grouping practices.

ISSUES IN GROUPING

The major issues in grouping children for instruction may be classed as philo-

sophical, sociological, and psychological.

Philosophical Issues. To some people the idea of dividing pupils within a class into separate groups for reading or any other type of instruction is undemocratic. They assert that all are entitled to exactly the same educational diet. This is interpreted as meaning the same materials, the same books, the same content. To other people equality of schooling means equality of opportunity to learn. If the first alternative is accepted, there must be a common assignment for all in the same book. If the second position is taken, adaptation of both methods and materials may be made to adjust to the varying abilities, aptitudes, and levels of readiness of children within a class. A variety of grouping practices may be the result.

Sociological Issues. An examination of the effect of socio-economic backgrounds on grouping practices is pertinent to any analysis of grouping issues. In some schools where there are well-defined minority populations, subgrouping within a class may be used as a kind of segregation. Sometimes when there are two or more classes at a grade level, one class will be composed primarily of the minority group. The justification given for this is that it facilitates the kind of instruction these particular children need, and that it is easier to teach a group of common composition. This procedure, however, denies to such children the many benefits which come from interaction with children who have had richer opportunities to develop a taste for reading. It is well established that capable intellects come from all segments of the population. Thus, some children can be denied the opportunity to make the full development of which they are capable by the restriction of their educational nourishment. These children do need special help in specifics. But they also need the stimulation that comes from working with children who have had

Another type of pupil sometimes penalized by being placed in a slow moving group is the child from a low socio-economic background who is not a member of a racial or national minority group but who has had limited exposure to good literature. Some of these children are indifferent to reading instruction because of the lack of value put on it by the home. They have not acquired discrimination in reading or an appreciation for the contribution that good literature can make to their own personal development. Special care needs to be taken to identify pupils capable of reading growth. Particularly in American democracy it is imperative that every child, regardless of race, color, or economic status, develop to the fullest his powers of critical reading and appreciation for good literature.

Psychological Issues. A psychological war has been raging between those who favor the subject-centered curriculum and those who favor the child-centered curriculum—an assumed incompatibility. Despite the fact that the self-contained classroom has become the accepted, standard practice in the American elementary school, there are those who would return to a platoon or departmentalized school with greatly increased emphasis on the logical, systematic development of the content fields and organized on the basis of reading ability. A multiplicity of grouping expedients have been employed to further this end, but such procedures come into conflict with what is known about good teaching-learning situations.

Principle of continuity—The principle of continuity has wide acceptance as a major factor in learning. It was to provide continuity and a situation in which teachers could develop an insight into the strengths and needs of individual children that the self-contained classroom developed. Any program of grouping which focuses exclusively on reading or any other subject as a basis for organization will tend to defeat these ends. When chil-

dren are scheduled to go from room to room for instruction with different teachers, any real continuity of learning and intimate knowledge of the child is next to impossible.

Principle of success—Success in learning is an important determinant in whether a child will be secure and happy. Psychologically, success in an activity is the greatest single motivation to further learning. Success in the development of reading ability makes a freeway of most roads of academic development. Therefore, it is important that grouping practices promote success.

This is not as simple as the mere statement of the fact implies. Children vary greatly in their need for success and status. Placing a child with a slow group where he can compete successfully in the specifics of the reading act may frustrate him because of his aspiration to be in the top group. Another child may be perfectly satisfied to work with a second group in reading because the pace of the first group is uncomfortably fast. Some children develop more rapidly because of external pressures. Other children will exhibit withdrawal or aggression tendencies because of the frustration from excessive external pressure. Some less endowed children are constantly striving to be members of the top academic group. Other slower moving children are happier in a slow moving group. Recently experiments in allowing children to select the group in which they think they will work best have demonstrated marked value. This consideration of children's feelings produces a better learning situation and ultimately a greater level of attainment. Psychologically, then, placement in a group becomes much more than adjustment to apparent academic aptitude. Factors such as aspiration, internal drive, and tempo must be considered. Placement in some instances can be based on academic ability; in others, on personality needs or on a combination of needs.

12 this mental age range had approximately doubled, from eight years to 16 years. Similar variation has been shown in the reading test scores and arithmetic test scores.

Two Generalizations. From these studies by child psychologists and educators two generalizations can be stated. First, the higher the grade level, the greater the range of differences within a class. For example, a teacher with a typical first grade will need to deal with a reading age range of three to four years. A teacher of the sixth grade in the same school would expect to deal with reading abilities ranging over a span of six to eight or more years.

A second generalization related to the first is that the better the teaching-learning situation, the greater the range of individual differences becomes. This means that a rich reading program consistently developed in the first, second, third, and fourth grades will aggravate the problem of instruction in the upper grades—the problem of coping with the divergent levels of ability.

Caring for Individual Differences. Education's answer to the problem of individual differences has been the development of a variety of grouping practices. Historically the teacher of the one-room school has always accepted the fact that he had to provide a variety of materials for instruction. There was no other way to cope with the problem. Sometimes the problem was solved by individual assignments and books, sometimes by having very small groups work together.

On the other hand, teachers and administrators in the larger, urban schools of many children in a grade have been ingenious in devising ways to circumvent the fact so readily accepted in the one-room school. The literature in reading is filled with studies on grouping practices.

ISSUES IN GROUPING

The major issues in grouping children for instruction may be classed as philo-

sophical, sociological, and psychological.

Philosophical Issues. To some people the idea of dividing pupils within a class into separate groups for reading or any other type of instruction is undemocratic. They assert that all are entitled to exactly the same educational diet. This is interpreted as meaning the same materials, the same books, the same content. To other people equality of schooling means equality of opportunity to learn. If the first alternative is accepted, there must be a common assignment for all in the same book. If the second position is taken, adaptation of both methods and materials may be made to adjust to the varying abilities, aptitudes, and levels of readiness of children within a class. A variety of grouping practices may be the result.

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Then, too, numerous groups are formed to give all members of the class much practice in a short time. Perhaps the children may be paired to practice oral reading, observing certain standards devised in a teacher-pupil planning period. Of course, this procedure is of value only as the reading materials are fitted to the individual child's abilities. Also the teacher should circulate among the groups giving as much guidance as possible.

On still other occasions, children's interests may provide the basis for grouping. In culminating a unit on "tales of old," one fourth-grade class formed interest groups to present a story review. One group engaged in preparing story dramatizations; a second group, in writing simplified versions of stories for children in a lower grade; a third, in setting up an exhibit of books with written captions; and a fourth, in summarizing the unit on a series of bulletin boards. Interests and needs in formulating and expressing ideas in a social situation determined the classification into groups.

FLEXIBILITY IN GROUPING

Good grouping practices never form rigid lines between good and poor readers. Flexibility and tentative groupings on a variety of bases are useful in preventing rigidity. Every effort should be made to avoid, in both our speech and our attitudes toward the groups, anything which might be interpreted as segregating children because they are slow learners. We cannot afford to be insensitive to the effects of children's opinions. When we imply that certain of the children are slow, the implication is harmful not only to the children so designated, who may easily develop feelings of inferiority, but also to the rapid learners because they are prone to conclude that they can succeed without diligently applying themselves.

Another way to avoid undesirable distinctions involves planning some activities to be shared by all groups. These may be

storytelling, dramatizations, book-sharing programs, individual reports, display of construction and art work, and almost any of the activities designed to introduce or to culminate a unit of reading. In such activities, all the children are encouraged to contribute.

PURPOSEFUL SELF-DIRECTED ACTIVITIES

If the class is organized so that the teacher works with some of the children while one or more groups work alone, the teacher has an opportunity to encourage those working independently to take responsibility and to be sensitive to the rights of others. By using positive incentives she can help her pupils decide for themselves how best to act when others are busily at work. After much practice the children can learn to move around the room as necessary and even to talk over problems with one another without disturbing other groups.

The teacher will need to provide for enjoyable and purposeful independent activities. Much of the effectiveness of her instruction will depend on her avoidance of meaningless seatwork or busy work.

There are many possible types of worthwhile independent activities for children. One kind is the free reading of books on the unit that is under way. Of course, this activity taxes the teacher to assemble enough suitable books. The children using library and work tables can gather around numerous attractive books and become absorbed in reading them.

Examining pictures on the unit to see what can be learned from them is always helpful. In the middle grades children may be invited to write a statement giving one new fact learned or even a paragraph summarizing ideas gathered from a whole collection of pictures which can be passed easily from child to child. Also composing captions for pictures to be posted in the classroom is a good language arts activity.

A RESOLUTION OF THE ISSUES

To meet the child's psychological demands, some teachers use flexible grouping arrangements. Sometimes a pupil may work with two groups, one primarily for academic development, the other primarily for personality development. For this reason, too, some teachers plan for a variety of groupings for reading instruction. At times the class may work as a unit. *All* share in a common experience such as the cooperative development of a reading story. Individuals share interesting anecdotes from their independent library reading. A number of work-study reading groups exist. The reading period does not

need to become a set routine where two or three or more fixed reading groups always work together.

The problem, then, is to achieve a psychologically desirable balance between the personal growth needs of the child and the need to organize and systematically present experiences in the content field. The two ideas are not mutually exclusive. The saying, to teach the child and not the subject, is not acceptable. The child must be taught something. The problem is to teach the child through the subject. This can be facilitated best through flexible groupings within the classroom.

22

Good Practices in Grouping*

Gertrude Whipple

Today, most basic reading activities are organized in units centering around a suitable theme of interest to the class, such as aviation, the community, wild animals, and children of other lands. Because the theme is similar for the entire class, it provides a common framework for instruction. Within this framework, the reading experiences are highly diversified through group instruction. Different groups read for different purposes, use different reading materials, and receive different kinds of guidance from the teacher.

PATTERNS OF GROUPING

No single pattern of grouping is adequate. On many occasions, the children are

classified into two or three groups according to their general reading attainments, with pupils shifting from group to group as needs change. For example, a child develops rapidly in many abilities, or develops special needs which can best be met in another group.

On other occasions, the children are classified according to their need for instruction in some special reading skill, for example, rapid skimming or the use of the dictionary to obtain the meaning of words. They are organized into two groups: one requiring instruction, and the other having no need of it, either because the children have already mastered the skill or because they lack readiness for it.

* *The Reading Teacher*, VII (1953), 69-74.

some portion of what they have read, time should be devoted to having the group evaluate the illustrations in light of the context. This is an excellent activity for improving comprehension and interpretation of material read. In the case of written work, evaluative activities will lead the children to appraise their spelling, handwriting, and expression. The appraisal ought to place emphasis chiefly upon the choice of the best ideas met in reading and upon good clear expression that others will understand.

Building a group composition which utilizes the ideas the children have gained through silent reading is a useful activity. The composition may be either creative or informational. If, for example, the group has been perusing poems about dogs such as Winifred Welles' "Dogs and Weather," with the teacher's guidance the children may develop on the board a poem about the dog they would like to walk with. On the other hand, in informational composition, the children may wish to make a summary record of what they have learned or to prepare explanations of articles they are placing on display in the room. Together the children may decide on the ideas to be included, on the order of presenting them, and on the specific statements to be made, as the teacher or a capable child records these on the board.

Perhaps no use of the teacher's time with the children is more significant than that spent in guiding discussions based on silent reading. Here we must remember that children require help in language arts other than reading. The children should be led to do most of the talking. The teacher should give enough guidance to insure that the discussion has real educational value for all those concerned—the slow, reticent pupil as well as the bright pupil in the same group. (Grouping, of course, does not equalize needs but merely reduces the range of individual differences in some few respects.) As soon as possible, children ought to learn to follow the rules

of courtesy so well that the raising of hands is unnecessary. Standards to guide the discussion may be developed on the board by the group with the help of the teacher. Examples:

We try to say something worth hearing.

We give everyone a chance to talk.

We listen carefully to what others say.

We ask someone to explain anything we do not understand.

We talk only when no one else is talking.

We keep to the subject.

We talk so that others can hear easily.

Whenever working with a group of children, then, the teacher stresses purposefulness, child activity, participation by every child in the group, and the integration of reading with the other language arts.

GUIDANCE THROUGH GROUPING

Good grouping in the classroom enables the teacher to help the child develop his capacities to the fullest extent. With fewer children to work with at a time, she can give greater attention to the individual child's needs. Recognizing that his progress in reading is dependent on many factors, she can acquaint herself with his intellectual, emotional, and environmental responses. She is then in a position to adapt instruction to the particular child and thereby to prevent maladjustment.

One of the big outcomes we are striving for today through the reading activities is success and satisfaction. This has become an outstanding goal because of the fact that personality problems are frequently associated with reading failure. Therefore, in our group activities, let us note at once any child who seems immature, restless, worried, discouraged, retiring, overly ambitious, or unusually aggressive. Would it not be wise to ask ourselves: Why does this child act in this way? How shall I interpret his responses? In terms of our best answer we can then create in

Of course, all such written work should be carefully evaluated by children and teacher.

Instead of giving the conventional list of questions to be answered *after* reading, why not ask the children to try to answer fact questions *before* reading and then to check their answers by reading? One class attempted this with much pleasure in connection with a factual selection on the habits of squirrels. The teacher gave no clues as to whether or not the oral answers preceding the reading were accurate. Instead, after replies had been given to all the questions, she indicated that some answers were excellent but that others were either incomplete or wrong. She then encouraged the children to read the story in order to verify their own information.

Other types of independent activities are many and varied. In the very early grades, for example, the children may finger paint, observe or care for pets, cut and paste pictures into a booklet, decorate boxes they are planning to use for some purpose, model with clay, make birthday cards or decorations and materials for a party, and look at picture books, children's magazines, and illustrated catalogs. In Grade 3 and above, independent activities include: writing the last three lines of a poem when given the opening line; writing an original fable after reading and discussing many fables; matching poems with pictures in preparation for making an illustrated book of poems; copying new words learned in "my own vocabulary book"; working on scrapbooks; preparing labels for exhibits; copying experience stories or group compositions to take home; preparing articles for the class or school newspaper; writing at the blackboard; and looking through books to find stories on a given topic and stacking the books for use.

Variety is essential. If children are expected to carry on the same type of independent activity day after day, they find it monotonous and tend to fritter away their time, and fail to think. This is just the opposite of the attitude for which we should

strive—one of thinking actively, choosing, experimenting, judging, reasoning, and imagining.

ACTIVITIES UNDER DIRECT TEACHER GUIDANCE

In working with groups it is desirable that the teacher take a leisurely approach. She should not feel hurried to get to another group since the introductory activities determine to a large extent the value of the subsequent reading activities.

Whatever the school grade, whether Grade 1 or Grade 8, the teacher's aim in introducing new reading material is the same. She is endeavoring to relate the content to the child's experiences, foster interest in it, establish motives for the reading, and anticipate and overcome difficulties, including those presented by unfamiliar words. Often in a stimulating introduction to a story, the teacher will refer to the pictures in the book, and will build up on the board questions that the children in the group wish to have answered. Before oral reading she will perhaps encourage the children to devise suitable standards, e.g., "try to interest everyone in what you are presenting," "read loud enough for everyone to hear."

Sometimes the group activity will be concerned with the outcomes of rereading. In a seventh-grade class, for instance, a group had reread a vividly written selection to identify sound pictures (e.g., the galloping of horses, the clatter of plates); color pictures (e.g., through the bleached silver grass); odor pictures (e.g., the mellow smell of coffee); action pictures (e.g., tramped steadily, turned an expert somersault); and descriptive pictures (e.g., towering cliffs). In the class period that followed, sentences and paragraphs were read aloud and comments made to identify and support the students' choices of word pictures.

A further important activity consists in appraising work carried out by the children independently. If they have illustrated

ball to teach physical education. We must examine the process to discover the elements that help the beginning learner, and we must know what degree of mastery is desired in terms of individual needs. And finally we must know how to secure and maintain the child's interest.

All this means individualization of instruction. We know that while each child is different he also has many things in common with others. Grouping by age standards is so familiar we hardly consider it grouping. In every school we group by interests: those who play games well become a team; those who sing or enjoy music form a chorus; those who like wood-working form a group different from that which wants to sew. And we know that some will grow faster, some will be better cared for at home, some will be more popular with their group than others.

What then are the problems that teachers face in grouping for instructional purposes? Usually it is quite simple to locate the extremes—those who are most advanced and those most immature. When these extremes are so great, teachers recognize that here are children who must be considered as individually as a rural school-teacher considers separate grades.

GRADE ACHIEVEMENT

As already mentioned, "grading" children into first grade, second grade, and so on is simply one way of grouping the population of a school. It means that second-grade children are different from first-grade children in respect to age or time spent in school and in that respect only. There are second graders who can read "third-grade" material and some who cannot read "first-grade" books.

Robert Hill Lane in *The Teacher in the Modern Elementary School* suggests that it helps simply to refer to children in terms of chronological age instead of grades. Instead of "B 2's" he refers to them as "seven or eight-year-olds." This places stress on social maturity and of course concerns

more than reading ability. It is impractical to suggest that the solution for grouping is school reorganization. It is important that the idea of "grade" be recognized as a limited description of a group with which most people are familiar.

SOCIAL PRESSURE

In the 1920's and 1930's there was a great deal of experimenting to secure homogeneous grouping by dividing classes in a school into X, Y, and Z sections. This was primarily based on the I.Q. The slow-learning group with I.Q.'s of 90 and below were the X group. The fast learning with I.Q.'s of 110 and above, the Z or fast group. Unfortunately these groups soon became labeled as the "smart group" or the "dumb group." And even in the primary class which is divided into groups for reading, some teachers have referred to them as the Oaks, the Elms and the Saplings, and one teacher labeled hers the Trees, the Flowers and the Weeds.

Of course parents objected, and many a child felt shame and heartache. A wise teacher puts children in more than one group during the schoolday, does not encourage competition between groups, and above all, recognizes that children learn much from each other. The slowest reader and the best may be the closest friends socially because of common interests such as sports or common neighborhood activities. Reading is important—but there are other learnings of equal importance.

SCHEDULE PRESSURE

Learning cannot go by any mechanical limits without becoming mechanical. The job is to teach reading, not to manipulate groups of children. Children expect and profit from the security of pattern and routine, but flexibility within the schoolday is essential to group instruction. Some days the teacher will spend more time with one group than with another; certain explanations and drills are profitable for all, and certainly groups should share experiences.

school the best possible situation for freeing the child of tensions, worries, or wrong attitudes either toward himself or toward his classmates. Let us connect with group reading a maximum of fun, enthusiasm, and individual and group success. Thus, grouping aids in the development of the child's personality.

However, grouping cannot achieve everything desirable in the classroom. It is no panacea for all ills. Rather it helps us to carry on as nearly individual work as possible in a fairly large class. It enables us to meet children's needs much better than if we gave instruction to the class as a unit. The degree of success achieved through grouping will depend largely upon the energy, understanding, and skill of the teacher. The good teacher will read such reports as those contained in this issue of *The Reading Teacher*, will experiment, and will develop further those procedures which prove successful.

SUPERVISION FOR BETTER GROUPING

Grouping is most likely to succeed when supervisors and administrators facilitate

the teacher's efforts. Among her needs is an adequate number and variety of reading materials for her pupils. Thus the school administrator interested in improving grouping should order many individual books, sets of supplementary books, and a supply of basic readers at the children's reading levels. He should not mechanically order a reading textbook for the given grade in numbers sufficient to supply each pupil with a copy.

Also, the school leader will need to determine the difficulties which the teachers face in using grouping to the best advantage. He may invite teachers to describe their handicaps, then follow with definite help in overcoming these. This will consist, perhaps, in short meetings where teachers exchange ideas and share the good techniques they have worked out, in aid to the individual teacher in grouping her pupils and fitting the reading materials to their abilities, in arranging visits for teachers to observe the reading activities of other classes, and in preparing concrete bulletins of suggestions based on superior practices in schools the country over.

23

Group for Better Reading*

Paul S. Anderson

One principle of successful teaching is that we must begin where the child is and gradually take him as far as he can comfortably go.

First, we must know *where* the child is. What have been his experiences? How

mature is he physically and emotionally? How well does he express himself? What is his rate of learning? What does he already know?

Then we must know the difficulties in the process we expect the child to master. We do not expect to start with algebra in order to teach mathematics or with foot-

* *The Grade Teacher*, LXXIII (March, 1956), 19, 90, 94.

Can tell what he sees in pictures	Yes	Yes	No
Can think clearly	?	No	No
Has had experience with word sounds	Yes	No	No
Can tell experiences and story in sequence	Yes	Yes	No
Can handle books	Yes	Yes	Yes
Can find places in books	Yes	Yes	No
Is curious about signs and labels	Yes	Yes	Yes
Is interested in stories	Yes	No	Yes
Wants to read	Yes	No	Yes
Can listen to part of a story and supply an ending	Yes	Yes	No

In a rather brief time Miss Lane has divided her class into three groups of students whose needs are similar. Her first consideration in planning this grouping was to know each child well enough to recognize these needs. She identifies each group by the name of the child who is the leader for that week, and children will move from group to group during the year as their needs change.

In order to meet the needs of each group Miss Lane must know her instructional material as well as she knows the children. After consideration of her own abilities, the needs of the children, and the overall administrative situation, she may decide to follow any of three widely used programs. She may select one basic reading series, a different series for each ability level, or books related to units of work without regard to any series association.

SOME QUESTIONS

Why would Miss Lane use one basic reading program?

Miss Lane may be concerned about the need for a carefully planned reading program that would build specific skills without too great a vocabulary load. By adjusting one program to the different abilities of her group, she gains additional repetition on skills, since it is inevitable that groups at their seats will listen and observe

those participating in the drills. Frequently the word analysis and phonetic games could be used with the entire class. Children could help others in the class since the material is similar, and transfer between groups calls for few adjustments. Children who were absent for some time could join a slower moving group when they returned. Later the children might read a great many other readers as library experiences, but at this point their common needs are similar enough to be met by one series.

Would the program be better if each group followed a different program of readers?

Some years ago Clarence R. Stone in *Better Primary Reading* suggested that each group should follow a different reading program. Those who follow this plan feel that it is justified because of the following reasons: there is no danger of inter-group competition; it makes the day less monotonous for the teacher. Another reason, and one worth careful evaluation, is that different types of children respond to different methods of instruction. Since there is no one best way to accomplish this complex task of helping children learn to read, a variety of approaches increases the teachers' resources.

There are disadvantages in using more than one series. Transfer from one group to another is less easy since there are basic vocabulary differences. Indeed, two series of readers could introduce a very large vocabulary load, as well as a burdensome variety of concept.

What will happen as these children progress through the primary grades?

Teachers will continue to have three or more instructional groups in each class. Each group will progress independently. The upper group will read more and more library books to enrich their reading experience as they progress through the basic readers. The distance between the best readers and the poorest should increase, since their rate of learning differs so.

One great justification for good seatwork is that in addition to providing purposeful work, it keeps the other children in the room independently busy while the teacher devotes her attention to a group that needs her help.

SPECIFIC SITUATION

Last summer three boys celebrated their sixth birthday, and this year all of them are in the same first-grade classroom. John is the tallest. He is the son of a minister who was a chaplain in the army. John as a baby traveled a great deal. He likes trains and boats. In Germany he played with native children and speaks their language as well as precisely correct English. Lawrence is the youngest of four children, all of whom are in school. His father is a successful farmer. Lawrence would rather be with animals than people. At school he is very quiet. Joe is a little redhead whose father, he reports, "carries hod." He lives in a new house with a new television set. Joe's idea of social relations is determined by his fascination with wrestling. His interests are as transient as the flickering of a television screen.

These three show up in Miss Lane's classroom with thirty-five others who are six-year-olds and so are grouped with them. During the first few days Miss Lane works with them as individuals and as a group. They become acquainted with the teacher, each other, and the new environment. Miss Lane has been observing those who are aggressive or shy, the way each child speaks, their interest in stories that she tells or in games that are played, and she starts dividing the class into groups for work with readiness material. As this is used, the more mature will be placed in one group, the less mature in another, and those of average ability in a third. In some classes the extremes may be so great that five groups will be needed.

In addition to her observation Miss Lane will want to know the mental age of each child. She knows that while younger

children can be taught to read, those who are $6\frac{1}{2}$ mentally can be helped with much greater efficiency.

Then she needs to know the rate of learning of the children. Some will progress much less rapidly than others, and overstress on "keeping up" with others can lead to tragic problems of mental health; while some become lazy or bored because school is too easy. So she learns the I.Q. of each child.

Because reading readiness involves specific skills, Miss Lane needs to know which ones should be emphasized. For some children her own experience is adequate to determine this, but just to be certain a standard test of readiness will help her know the children better.

Here is what she learned about John, Lawrence and Joe.

	Chronological Age	Mental Age	I.Q.
John	6-2	7-4	119
Joe	6-3	6-3	100
Lawrence	6-1	5-6	90

READING READINESS TEST SCORES

	John	Joe	Lawrence
Making visual discrimination			
A. Attention span controlled	81	54	35
B. Attention span uncontrolled	95	57	30
Using the context	75	55	40
Making sound discrimination	80	62	50
Combining context and sound	75	68	40
Using symbols	90	75	40

In addition to this information Miss Lane keeps an inventory about the children. It includes the following observations:

	John	Joe	Lawrence
Can use school equipment	Yes	Yes	Yes
Can work at a task	Yes	Yes	Yes
Has basic information about color, number	Yes	No	No
Can listen and look attentively	Yes	No	Yes
Can listen and carry out directions	?	No	Yes

having one team read its answers, with corrections and additions by other teams. There need be no marking or scoring of team responses, although it is desirable for the teacher to receive and comment briefly on team products. This technique of "multiple recitation" is a good way to introduce team study.

A slight modification of the "multiple recitation" method is that of providing each group of three with questions to use while studying the lesson. An element of competition may be introduced by seeing which group can find and record the answers in the shortest time. If this competition is to be fair, the groups should be approximately equal in ability. The questions may be given orally by the teacher, and limited to a single section of the assignment, with teams working on that question only. Then the next question is given. A good rule is that pupils must first all read the section, then decide what to write. Then, and only then, is the secretary to receive the dictation. As soon as each group finishes, hands are raised. The teacher picks up the paper of the first group, and after others are finished, reads the answers of the first group while the others check their answers. This technique may be modified in many ways.

Pupil reactions to this type of lesson are almost always favorable. The following are typical comments of a class of fourth grade pupils: "I like it. You are interested and you don't dilly-dally. You really work." "It is fun. It is like a TV game." "I liked it because you can talk while you learn." "It is easier and more interesting than working alone." "I like being secretary." "I learn more that way." "It helps me to read faster." "I have learned to skim better." The teacher's observations of this group confirmed the pupil reactions. Interest and attention were high, most pupils delighted in the "game," every child took an active part, and most groups were harmonious. However, the successful use of the method requires several precautions.

There must be some thought given to the combining of pupils in the groups so that they work well together. A slow secretary is annoying to the group, and there is a tendency to always have the same secretary. Occasional misbehavior is quickly checked by the requirement that such pupils work alone; group work is so much preferred that little distraction arises. One group of girls did not get on well with each other, but this was corrected by a change of grouping.

Five-man teams were used with this same fourth grade in geography review lessons. Besides a secretary, one pupil was appointed a "consultant" to help any poor reader with hard words. It was the secretary's job to make sure that each member on the team knew what answer she put down and to have full accord before writing. The papers were corrected by having one member from each team go to the board and write one fact, with other teams adding another until the answers were complete. The groups corrected their papers against the complete answer. Since the review questions spanned several chapters, much skimming was involved. At first, the five-man groups had little "group feeling." It required several changes of grouping to arrive at teams in which all were happy and eager to work. Pupil reactions to this type of review activity were as follows: "I like this because the questions are harder and we all have to work together to get the answers." "I understand our lessons better now." "In the old way, I went along reading. Now I go back and review. That's why I like it better this way." Not all pupils gave favorable reactions to the five-man teams. The early lack of harmony bothered them. More experimenting is needed before it can be concluded that the five-man team is less workable than smaller groups in this fourth grade. Tests over the material showed that the review team practice was very profitable for the pupils.

pupils. The teacher will need to make suitable "ground rules" for the teams; sometimes "looking back" to find answers to questions may be permitted, sometimes not. In scoring answers to general questions, liberal or strict scoring may be used. In general, it is best to encourage liberal scoring; if the responding child insists "that is what I meant," or if qualifying adjectives or phrases are omitted, the answer may be considered correct. The object of the exercise is to practice recall, and the learning that takes place is more important than the immediate score.

Groups of five pupils seem to work well when elaborate thinking or planning is required. After reading a geography selection on Italy, the group may be asked to list additional information they have: people who have come to this country from Italy who are prominent in baseball, movies, television, politics, or local people who have Italian backgrounds; things we use which come from Italy; things which could be included in an exhibit or an assembly program; questions which might be asked or information which could be included in a letter written to children in Italy. Every pupil seems to participate when groups are limited to five, but individual participation is diminished when groups become as large as seven. Pairs and groups of threes run out of ideas more rapidly and are less secure than groups of five. In elaborative thinking assignments, pupils may be grouped without regard to reading achievement. The correlation between elaborative thinking ability and intelligence or achievement is not high, and

some slower pupils may be full of ideas in elaborative thinking situations.

It should not be assumed that pupil study teams may replace all other types of instruction. There are many activities in which the class may profit by all receiving the same presentation. When learning takes place by listening or seeing, rather than by reading, a much wider range of grouping is possible. Demonstrations, field trips, moving pictures, recordings, exhibits, story hour, listening to plays, choral reading, and other similar activities are presented to the class as a whole. But when learning is through reading, or is directed toward skills, pupil study teams have high promise. Word analysis exercises, sight vocabulary practice, dictionary skills, phrasing and expression in oral reading, speeded reading and skimming, spelling, and other skills techniques are suitable for study team work.

The use of pupil study teams for various purposes and in various combinations appears to be a highly promising field for adventure in teaching and research. Materials will need to be developed for self-directed team use in many phases of reading instruction. The optimum size of groups for different purposes and different levels, the methods of forming and changing groups, the method of administration of groups progressing at different rates in different skills, and ways of evaluating outcomes of study team techniques are all fruitful fields for pioneering. Certainly, pupil preference for team activities is great enough to warrant wider use of study teams in classroom activities.

ity. Observations were recorded by code and supplemented by eye-movement photographs.

Afterward each student took two tests, one on general ideas, and the other on details. As the criterion of skimming ability for this investigation, a time unit score was obtained by dividing the subject's combined scores on the two tests by the time required for reading.

The next step was to make an intensive study of the five people in each group who had the highest scores, called "The Goods," and the five in each group with the lowest scores, "The Pools." An analysis was made of their comprehension test scores and of their reading techniques as revealed by observation and eye-movement photographs. They were also interviewed to discover their attitudes toward reading, and to check with them the observations recorded. Conferences were held with expert teachers on various levels, and classroom observations supplemented findings of the study by adding information on points of view and practices in the teaching of skimming.

WHAT WE LEARNED ABOUT SKIMMING

Results of the study showed marked differences among individuals in the same age-grade level, even though all were average or above in intelligence and in general reading ability. Persons rating superior skimming ability used many more techniques, as shown by flexibility (of rate) and originality, than did those whose scores were near the bottom of the scale.

For example, one college freshman representing the Goods, had a reading rate ranging from 600 to 1380 words per minute with 84% comprehension of general ideas and 60% of the details. In that part of the selection read most slowly every line was covered with two or three fixations per line, while in the part read most rapidly there were five sweeps across the card of 12 lines, with one or two fixations per

"line" across the card as shown by the photographs.

Another freshman, representing the Pools, showed a range of 175 to 240 words per minute, and scored 42% comprehension of general ideas and 70% of the details. In the portion read most slowly the subject covered every line, rereading three lines of the 12 and regressing many times. Even in the part read most rapidly every line was covered. For the entire selection this person's average number of words per fixation was 1, in contrast to 2.65 words per fixation averaged by the freshman cited above.

A relationship was shown between the scores of skimming ability and standardized test scores of intelligence and reading, but with marked exceptions. A high total score on a standardized reading test did not assure the ability to skim. For example, one college freshman with a psychological rating (percentile) of 85 and a reading rating of 85 required 21 minutes for reading the selection, with an average rate of 198 words per minute, and 51 per cent correct on the combined tests. Another college freshman with a psychological rating of 77 and a reading rating of 82 required 5.8 minutes for reading the selection, with an average of 72.3 words per minute, and 73 per cent correct on the combined tests.

The smallest differences in rate and the greatest in comprehension were found in the fourth grade group, with the seventh grade group next. At these levels ability to comprehend and evaluate ideas was a greater determining factor in skimming ability than was rate of reading. In the adult group circumstances were reversed.

Techniques observed in skimming included skipping in various degrees, marked changes in rate, pausing, regressing, looking back, and looking ahead. The last-named was used infrequently, however. All were observed at all levels. Mastery of certain fundamentals of reading—mechanics, vocabulary, comprehension, and thinking—appeared to be necessary for efficient

What Is Skimming? What Are Its Uses at Different Grade Levels?*

Helen S. Grayum

Not only are most adults intrigued by the process of reading; they are genuinely interested in improving their own techniques. With students and businessmen, lawyers and homemakers, farmers and tradesmen, clerks and scientists, the response is the same. There is more reading to be done, they say, than they can possibly cover—reading that is a part of keeping up-to-date with the everyday tasks at hand. They often feel a personal shortcoming, and wish they could command greater skill. This was one of the most striking observations noted in a recent exploratory study made in reading.

The types of reading ability needed today are many, just as the purposes of reading are many. In the past, the teaching of reading has generally emphasized development of a detailed and meticulous approach, although some authorities have long favored different procedures when reading for different purposes. Some purposes, these authorities point out, require careful study of individual words and word relationships, and time for reflection, while others are adequately achieved by comprehension of the main ideas. Ability in reading for one purpose does not, however, assure equal ability for another. Reading which is slow and laborious does not necessarily indicate ability for any purpose,

although it has often been associated with "careful" and therefore "good" reading.

The reader's attitude toward rate, often instilled early in reading experiences, is a potent factor—it can permit or prevent development of variety in reading rate. The reader may, on the one hand, recognize the need for an increased rate sometimes, yet refrain from attempting to read faster because he feels that to read faster is to read less carefully.

Although reference to skimming has been made off and on for the past fifty years, little information about skimming and how to teach it is found in professional literature. Therefore, an exploratory study to discover the nature of skimming, its purpose and place as an ability in reading, was needed.

A STUDY OF SKIMMING

Twenty-five students in each of six groups took part in the study. The six groups were fourth graders, seventh graders, tenth graders, college freshmen, graduate students, and widely-read adults. All had intelligence and reading ability that were average or above.

A readably-written selection of social studies content, generally not unfamiliar, with a comparatively light concept load was chosen for each of the six levels. Each person was asked to skim the selection according to his best knowledge and abil-

* *The Reading Teacher*, VII (December, 1953), 111-14.

Helping Bright Students Who Read Poorly*

Phyllis Bland

Through newspaper reports, feature magazine articles, the radio and TV, and books sometimes on the best-seller list, we are informed of our need for better schools and for more effective educational programs. Despite some conflicting opinions, there is rather general agreement between educators and laymen that the strength of tomorrow's citizenry depends upon our success in preparing superior children and youth to accept responsibility for leadership. There is evidence of a tragic neglect of these students in many school systems. Despite large-sized classes and unfavorable conditions which prevail in far too many schools, the high school teacher can often extend and enrich the opportunities of the gifted.

But it should be recognized that the modern high school often offers obstacles to the teacher who tries to extend or enrich the experiences of the gifted. Heavy enrollments, burdensome teaching schedules, inflexible courses of study, inadequate materials of instruction, committee assignments, frequent meetings, detailed record-keeping—all consume the time and effort of the teacher who would like to give more attention to gifted students.

The field of English offers an unusual opportunity for helping the superior student. The writer will describe some efforts to develop an enriched program for bright students with a reading problem in the

Evanston Township High School. The students include seven girls and five boys of high IQ and academic proficiency whose scores on reading tests were low.

In this article, the writer will describe three emphases used in her attempt to lead these bright pupils to read with greater understanding and pleasure. These include: (1) the study of words, (2) guidance in reading critically and in interpreting various types of printed materials, and (3) efforts to improve the study skills essential in various fields including English.

THE STUDY OF WORDS

In this program, the writer attempted to relate the study of vocabulary to worthwhile activities in listening, writing, and speaking. Fortunately, there was little difficulty in introducing this program to the bright student for he is capable, and eager to express himself in various ways. With this class of bright students, the writer attempted to follow these suggestions found in *Word Clues* by Amsel Greene:

1. Awaken an interest in words and a curiosity about their composition and history.
2. Make familiar those Greek and Latin roots which are clues to the meaning of hundreds of unknown or imperfectly understood English words.
3. Correct and clarify misconceptions of the meanings of words of similar sound.

* *The Reading Teacher*, IX (April, 1956), 209-14.

skimming. In addition, those classified as the Goods showed excellent judgment in adjusting reading rate according to the content (although there was great variation in rate of reading specific portions of the selection), and showed persistence in adhering to the immediate purposes of reading. Those classified as the Poores, on the other hand, were more inclined to read everything at the same rate, or showed less wisdom in the discrimination of ideas for the immediate reading purposes.

The study showed that response to the content was a highly individual matter; minute personal reactions were reflected in the reading pattern. Skillful skimming might be called a form of rapid reading but implies, the study indicated, advanced or higher-level techniques.

CONCLUSION

Concepts of skimming, referred to near the beginning of this report, may be grouped into four broad categories, according to the purpose for which the ability is used. The chief purposes of skimming at certain grade levels recommended in thirty representative courses of study, listed in order of frequency of mention, were:

1. To find specific information—stressed on primary and intermediate levels, but not at senior high school level.
2. To find pertinent information in a certain book or article—emphasized at all levels but proportionately more in senior high school.
3. To find general ideas—also emphasized at all levels, but proportionately more in senior high school.

4. To locate information, such as appropriate books and articles—stressed at all levels.

The value of skimming to get a general picture before reading for details was pointed out by teachers at all levels except the primary.

There is need for a more comprehensive view of the meaning of skimming. Greater understanding of its nature and techniques, as well as of its uses, would aid teachers in developing this ability more effectively in their students. Interviews accompanying this study revealed that a teacher's own ability to skim appeared to influence the encouragement of this skill. Furthermore, an abundance of suitable reading material at hand is probably an important provision.

The foundation for this ability should be laid when the child is learning to read, and guidance in its development continued judiciously throughout his school career as a part of the whole reading program. Students should be taught how to determine candidly their own purpose of reading, how procedure may vary according to purpose and background of information, and the significance, in time and satisfaction, of using the reading procedure best suited for a particular purpose.

Of prime importance in developing the ability to skim is establishing the purpose, evaluating the importance of ideas in terms of the purpose, developing flexibility of rate, and encouraging individual techniques which accomplish clearly the purpose for reading. For there must be not only conviction but determination in order, as one seventh grader put it, "to get the most meaning from the fewest words."

fects meaning." He also states that the development in pupils of a clear understanding of words which have no direct referents is one of the most difficult tasks confronting teachers and that "these words form the 'core' of the vocabulary in the social studies. Difficulty with these words frequently precludes communication, creates confusion, and actually may lead to serious misunderstanding or emotional disturbance. A soundly conceived reading program makes provision for the mastery of conceptual terms by offering students an opportunity to discover their meaning through investigation, discussion, and critical study." As the students gain in appreciation of the importance of words and their meanings, they are led to see that:

1. Words are not the *things* they stand for.
2. Words which classify often overlook the common characteristics of the things they separate.
3. Words have relative value and must denote degree of value to give a clear concept.
4. There is a difference between report and judgment as well as between report and inference.
5. It is desirable and interesting to evaluate figures of speech.

The students soon discover that the daily newspapers and TV and radio programs may become teaching aids which can be profitably studied in terms of principles set forth in: *Language in Thought and Action* by I. Hayakawa, *Tyranny of Words* by Stuart Chase, *Language Habits in Human Affairs* by Irving Lee, *Words and What They Do To You* by Catherine Mintler, and *Language Power for Youth* by Cleveland Thomas.

INTERPRETATIVE AND CRITICAL READING

Interpretative Reading. An appreciation of the basic principles of semantics often stimulates the superior student to read critically without sacrificing aesthetic enjoyment of literature. His observations

lead him to differentiate figures of speech which distort meaning from those which enhance meaning. Thus the students avoid the common error of searching for literal meaning in figurative expressions. Attention is directed increasingly by them to the author's purpose, style, or symbolic presentation. Gradually they became so much interested in figurative speech that they are helped greatly in reading many selections. For example, the drama of *Macbeth* is often unrealized because figurative speech or unfamiliar vocabulary preclude understanding. Thus, students who read the following passage with appreciation of its figurative language are enabled to comprehend its meaning and are interested more fully:

*But screw your courage to the sticking place,
And we'll not fail. When Duncan is asleep—
Whereto rather shall his day's hard journey
Soundly invite him—his two chamberlains
Will I with wine and wassail so convince
That memory, the warder of the brain,
Shall be fume, and the receipt of reason,
A limebeck only; when in swinish sleep
There drenched natures lie as in death,
What cannot you and I perform upon
The unguarded Duncan? What not put upon
His spongy officers, who shall bear the guilt
Of our great quell.*

Stephen Vincent Benet's *John Brown's Body*, which contains much figurative prose, is another required reading in many senior high schools. The colorful portrait of Abraham Lincoln is an example:

*Lincoln, six feet one in his stocking feet,
The lank man, knotty and tough as a
hickory rail,
Whose hands are always too big for white
kid gloves,
Whose wit was a coon skin sack of dry,
tall tales,
Whose face was homely as a plowed field.*

4. Ensure a swifter and more accurate comprehension of what we read.
5. Awaken a sensitivity to the latent values of words which enhance our appreciation of literary merit.
6. Develop in our own writing and speech finer discrimination in the choice of words.

This type of word study created interest and curiosity about words, their origins, and their present functions. The students became greatly interested in the history of words—the fact that a word such as “school” originally meant “leisure” and that “focus” was derived from the Latin equivalent for “fireplace.” The work then proceeded to include study of sources such as: *A Dictionary of Word Origins* by Joseph T. Shipley, *Word Origins* by Wilfred Funk, *Thereby Hangs a Tale* by Charles E. Funk, *More About Words* by Margaret S. Ernst, and *Picturesque Word Origins* by Margaret S. Ernst. Research which was rewarding for the bright student followed. Study of common roots helped him to understand the meaning of some words, and further study helped him to appreciate the role of prefixes and suffixes in affecting meaning. Materials such as *Word Wealth* by Ward S. Miller, *Word Power Made Easy* by Norman Lewis, *The Techniques of Reading* by H. Judson and K. Baldridge, *A College Developmental Reading Manual* by V. Wilking and R. Webster, or *Word Clues* by Amsel Greene offered practice which was correlated with other activities in language investigation. For example, word “hunts” were used to build dictionary skills. The relationships between words such as *generous*, *eugenics*, *psycho-genetic*, *congenital*, and *generation* were brought out. Flash cards, puzzles, tape records, and other devices were used to heighten the students' interest in words.

It is illuminating to study the recent growth and change in language traceable to the following causes:

1. Borrowing from foreign languages: *Blitzkrieg*, *flak*, *Luftwaffe*, *panzer*, *tamba*, and *canasta*.

2. Duplicating sounds: *bebop*, *walkie-talkie*, *boogie-woogie*, *peepie-creepie* (for a portable TV camera).
3. Generalizing from trade names: *frigid-are*, *deep freeze*, *polaroid*, *nylon*, *orlon*, *arilan*, *cellophane*, *celotex*.
4. Shortening well-known terms: *H-bomb*, *jet*, *polio*, *WAC*, *WAVE*, *SPAR*, *CARE*, *DDT*, *UNESCO*, and *VIP*.
5. Describing scientific developments: *cyclotron*, *aureomycin*, *penicillin*, *antihistamine*, *nucleonics*, *psycho-surgery*.
6. Telescoping two words into one: *smog* (for smoke and fog), *brunch* (for breakfast and lunch), *motel* (for motorist and hotel).
7. Translating abbreviations into sounds: *MC* to *emcee*, *VP* to *veep*, *GP* (general purpose car) to *jeep*, *CB* (members of the U.S. Construction Battalion) to *Seabee*.

High school students are sometimes surprised to learn that the past generations, including their parents, contributed to our language with words such as *jog*, *tops*, or *dude*. Today's teen-talk, they come to realize, is just another part of the changing language. Students read with interest an item in *Time* entitled, “Far-Out Words for Cats,” which shows that teenagers are creating a “jazz lingo” with the same enthusiasm that they are supporting a multi-million dollar recording business. *Time* points out that the terms currently used by the younger set include *ball* (good time), *cool* (relax), *dig* (understand or appreciate), or *hep* (in-the-know), and *on* (addicted to dope). These and other picturesque expressions permit the students to bring the teacher up-to-date on language change. This type of word study serves to enhance the bright students' interest in words.

One of the chief phases of this work with bright students is an emphasis on the varied meanings of words and the importance of conceptual terms. Paul Witty, of Northwestern University, points out that the science of semantics has resulted in a “renewed emphasis on vocabulary and has focused attention upon the way context af-

Poetry such as Robert Frost's *Mending Wall* offers further opportunities to stimulate the superior students to recognize and interpret symbolism:

*Before I built a wall I'd ask to know
What I was walling in or walling out,
And to whom I was like to give offense.
Something there is that doesn't love a wall,
That wants it down. I could say 'elves' to
him*

*But it's not elves exactly, and I'd rather
He said it for himself. I see him there
Bringing a stone grasped firmly by the
top*

*In each hand, like an old-stone savage
armed.*

*He moves in darkness as it seems to me,
Not of woods only and the shades of trees.
He will not go behind his father's saying,
And he likes having thought of it so well
He says again, 'Good fences make good
neighbors.'*

The bright student is capable of responding to the subtleties of good literature through: (1) recognizing quickly the author's purpose; (2) understanding inferences; (3) anticipating outcomes; and (4) analyzing the author's style. Universities report that these skills are lacking in many capable students, and they encourage the high school administrator to offer college level and honor courses to provide a better foundation for scholarly endeavor. Such classes have been offered successfully in the Evanston Township High School. Herein, the able students' course-of-study has been enriched in the junior and senior years to enable him to develop a more mature appreciation of literature.

Critical Reading. An emphasis on critical reading encourages the bright student to develop an inquiring attitude toward the ideas presented by the author and to pass judgment based on logical thinking. This leads the student often to read widely in order to consider questions such as:

3. Are the arguments and evidence adequate to justify the conclusions?
4. Is the presentation well documented?
5. Are propaganda devices used?
6. What inferences and implications can be derived from the reading?
7. What are the viewpoints of other authors on the same topics?

STUDY-TYPE READING

The bright student's ability to learn rapidly does not always assure success in school or lead him to develop skills in study-type reading. Without the challenge of an enriched curriculum, the rapid learner may acquire many inefficient study habits. He often needs guidance and practice in developing these skills. Evanston Township High School's six-week reading workshop for the college-bound student provides practice in reading from materials such as: *Studying Effectively* by Wrenn and R. Larsen, *The Techniques of Reading* by H. Judson and K. Baldridge, *Study-Type Exercises—College Level* by Ruth Strang, and *A College Developmental Reading Manual* by V. Wilking and R. Webster. *How To Become a Better Reader* by Paul Witty is used as a basic text and much time is devoted to the discussion of how to concentrate, take effective notes, and prepare for examinations. Students are encouraged to develop flexible reading skills in order to understand the purpose of different assignments and to lose a fear of examinations, which they sometimes exhibit. In addition to the three phases of the program for the superior student described, there is an effort to provide wide reading for each student in accord with his interests. Opportunities are offered the superior student to read many biographies, to explore in the field of science, and to become familiar with the varied source materials necessary in many projects. The program recognizes the importance of reading from many sources and in many fields in order to satisfy the interests of bright students and to enable them to develop individually ap-

1. What is the purpose of the author?
2. Is there a logical development of the basic ideas?

ing out new words. In second grade my teacher implanted a love for reading."

Having acquired a basic sight vocabulary and mastered word recognition skills, they began to read extensively.

If they were not reading up to capacity, the wise teacher helped them individually:

"I lost my reading interest in third and fourth and don't remember reading anything of importance until I came to Lowell in the fifth grade. There, I was given a standard reading test. My score came out 3.3, which wasn't good. My teacher seeing this got after me. Every spare minute of the day for weeks she made me read. It paid off, for in June of the same grade, I took another test. This time my score came out 9.6."

For these bright children, a special literature group was stimulating and enjoyable:

"In the sixth grade I was in a special literature group which covered the different classifications of literature. In this class we made oral reports on the books we had read for a week and we made notebooks on these books. We also gave two assemblies in which we gave dramatizations of the books, and at one time made a tape recording, that was broadcast over the air."

Judging from these reports, gifted children learn to read when they become aware of "the delights that lie between the covers of books." First they build up a basic sight vocabulary by associating printed words with meanings and remembering these meanings. Before long they learn word recognition skills that enable them to be "on their own in reading." From then on, the extent of their reading is determined by their interest and the time available.

WHAT DO GIFTED CHILDREN READ?

Their reading interests in the lower grades are not very different from those of other children. Before coming to school they look at picture books, read or listen to Mother Goose rhymes, read "The Little

Red Hen," "The Three Bears," and other simply written children's favorites.

Their first grade reader makes a greater impression on them than their supplementary reading of *Peter Cottontail*, *I Know a Secret*, and other easy books. In the second grade they frequently mention reading simple animal stories. Some of them begin to get interested in the Billy and Blaze, the Wilder, or the Barbar series.

Their reading interests expand in the third grade with more animal stories, the Betsy series, the *Wizard of Oz*, and *Curious George*. Some of them begin to read factual material—astronomy, *We Went with Marco Polo*, *The Book of Knowledge*. In the fourth grade they read more of the series books—the Willard Schultz and Enright series, *Nancy Drew*, *Clara Barton*, *Silver Chief*, *Doctor Dolittle*, *The Mercer Boys*, *Bobbsey Twins*. In addition they read *Homer Price*, *Kit Carson*, *Alice in Wonderland*, *Rabbit Hill*, and books by Kate Seredy.

In the fifth and sixth grades they are still interested in animal stories such as *War Horse*, *King of the Wind*, *Call of the Wild*, *Lad, a Dog*; humorous books such as *Mr. Popper's Penguins* and *Mary Poppins*; and adventure stories such as *Robinson Crusoe*, *Treasure Island*, *The Oregon Trail*, *Bride in the Solomons*. A few were reading quite extensively in science.

In the seventh grade the girls begin to be interested in romantic stories—*Seventeenth Summer*, *The Dancing Heart*, *Marie Antoinette*. They like teen-age stories very much. Boys read *Tom Sawyer* and *Huckleberry Finn*, sport stories, mysteries. Interest in mysteries and suspense stories was expressed as follows by a girl with an IQ of 139: "My reading interest varies, but it rotates around books that are exciting to the end—books that, while I am reading, I don't want to put down because of their mysterious or adventurous stories."

Another girl described her progression of reading interests as follows: "I have

to teach me to read," she said, "because I felt alone when everyone else could read and I couldn't. At that time I was a mere four years of age, so I couldn't read particularly well." A girl with an IQ of 134 first learned to read when she was five years of age. Her parents taught her to pronounce each letter; she says, "Since I was very fortunate in knowing how to sound out my words, reading was never very difficult."

HOW DO GIFTED CHILDREN LEARN TO READ?

A few somehow learn all by themselves to associate printed words with meanings. As one boy with an IQ of 136 said, "I got interested in books and read them; that was all there was to it."

Most of the gifted boys and girls who wrote these reading autobiographies report that they were taught by various methods, by parents, grandparents, brothers, sisters, or teachers. Many said that their parents read to them at an early age. Following are the methods mentioned, in order of frequency:

Sounding out words. (It may be that the phonetic approach is more appropriate for the quick-learning than for the slow-learning child because of the former's greater analytical ability.) One girl wrote: "Teachers of today are doing a very fine job of teaching children to read, but I do think they could pay more attention to phonics, the reason being that the children could figure out more new words by themselves."

Use of flash cards

Memorizing common words; learning words at sight, thus building up a basic vocabulary

Associating word with picture

Learning words in simple sentences, booklets, newspaper headlines, signs, self-teaching workbooks, first grade readers.

The variety of their early reading experiences is best illustrated by quotations from their reading autobiographies.

At first they memorized words:

"My mother and father were firm believers that books play a very important part in a child's life. When I was about one or two years old my mother or father read to me every night and afternoon. After a month or two of constant reading of my favorite stories over and over, or the reading of a poem, I learned them by memory. I was about four when I would sit down by myself, and telling by the pictures which the poem or story presented, I would act like I was reading. Soon I could distinguish words or sound them out. I believe I owe my interest in reading to my parents who showed me the world of books."

"At the ripe old age of five I got my first library card. Mother said that in first grade I could read fairly well. That was when I carried nineteen books home from that library, and when asked why I didn't get more, I replied, 'Because I couldn't carry any more.' If Mother read a short book to me before I really could read, I could repeat it nearly word for word from memory. My sister has the same kind of memory."

"As I remember, the way I learned how to read was by sight: (1) look at the word, (2) know its meaning, and (3) remember it."

"In first grade, after learning the basic words such as *it, was, were, have, had, spot, puff, Dick, Jane, mother, father*, and others, I zipped right along. I remember reading a book *I Know a Secret*, which was supposed to be hard for my age."

Soon they began to take a more analytical approach:

"How did I learn to read? First my grandma taught me, then I caught on to certain words and got accustomed to sounding out words."

"By very small words and sentences. Also by syllables and the letter's sound."

"In first grade the teacher was dismissed for teaching phonetics, but I think phonetics has helped me very much in sound-

pleasure although I can increase my reading speed if I must."

"Now in seventh grade I belong to Revelers, Campfire Girls, Y-Teens, 3 Star Club, write to about twenty people, and take knitting, piano, and oboe lessons, so my interest in reading is slowing down. But I still say, give me a good book any time."

Despite the pull of social activities, radio, television, and auto-riding, these gifted children find considerable time for reading. This is because they find reading an enjoyable and rewarding experience which challenges their active minds and satisfies their desire for knowledge.

DO THEY HAVE DIFFICULTY IN GETTING THE BOOKS THEY WANT?

The majority say they never or seldom have difficulty in getting the books they want. Many of them have the books they want at home or are able to buy them. A few mention these difficulties:

Librarian said book wanted was too advanced

Not enough current books in library

Difficult to get books you want because everyone else wants them, too

Not enough books by favorite authors

Difficult to find enough books on hobbies.

In their own words:

"One trouble with the library is that I'd find a good author who wrote books I would like to read, and what do you know, there is not another book in the library by him."

"I have difficulty getting articles on archeology. There are only three in our library. There are probably dozens in the big libraries, but I am new to this neighborhood and don't know my way around."

WHAT ARE THEIR READING HABITS?

Most of them like to be physically comfortable while they read and are aware of the importance of having good light. Some

of them describe reading methods that are, on the whole, sound and mature:

"I am a fast reader, and I usually skim over the pages, picking out the interesting words and sentences. I like to be in a very relaxed position when I read."

"The way I read most of the time is: First I glance through the book to see whether or not it looks interesting, if so, I read the first couple of paragraphs. If it is boring, I discard the book; if it is interesting, I usually start reading and finish the book."

"What generally are my reading habits? Usually in choosing a book I am very choosy. If I feel that I want information I will be found delving into the non-fiction type book. But occasionally, though not very often, I have some leisure at hand, so to arouse some interest I will read a fiction book. I happen to be very critical as to the fiction books I read, and I usually read very well-known novels. In a fiction book, once I start, I read continuously until either the book ends or until an interruption interferes."

WHAT ARE THEIR SUGGESTIONS TO TEACHERS?

These gifted children have three main suggestions for teachers:

1. Make interesting literature available; help pupils to choose their books; encourage them to read in order to find and widen their interests.

One way of arousing pupils' interest in a book is to read certain parts of it aloud. Said one boy: "Get them interested in books of interesting quality but yet of value so they will gain knowledge while enjoying themselves."

Another pupil wrote: "My interests in books are not usually confined to one subject. This year my different teachers have influenced my interests in reading. One has gotten me interested in composers' lives and another has encouraged me to read biography and fiction on many different topics which are very interesting."

checked out books for pleasure ever since I was in the third grade. Up until then we weren't allowed to check books out from our school library. In the third grade, I can remember reading the Betsy series. In the fourth grade, I can remember *The Good Master*, *The Singing Tree*, the Wilder series, the Enright series, and part of the Doctor Dolittle series. In the fifth grade, *Indian Captive* and *Black Beauty*.

A youngster with an IQ of 160 developed an early interest in more mature reading matter: "At seven I was reading animal stories; at nine I took a test at school and had a fourteen year reading level. Now I don't know what my reading level is, but I have read books such as *Scaramouche*, *Mysterious Island*, *Ivanhoe*, Charles and Mary Lamb's *Tales of Shakespeare*, *One Hundred Narrative Poems*, and *One Hundred Famous Poems*.

The following quotation gives insight not only in the reading interests of a gifted boy, but also into his concern about reading development and personal development through reading: "Adventurous and humorous stories thrill me. In finding books that I might like, I go by the author. When I find a book to my liking, I obtain other books by that author. The reason for this is that his other books are bound to be somewhat the same. One trouble with me is that I read too many fiction stories and not enough non-fiction books. I suppose you would receive the same practice in reading and vocabulary expanding, but by reading non-fiction stories it would increase your knowledge of authentic happenings and facts, besides making you a well-rounded person. Another of my difficulties is a vocabulary difficulty. Many times when I come to a word with an unknown meaning on my part, I do not stop and look it up to discover the meaning, but skip over it. This does not only not increase my vocabulary, but I do not get the full meaning of the sentence."

Specialized interests begin to emerge as the boys and girls grow older: "I like sci-

ence books, especially those concerning biology, nuclear physics, and medicine. I also like books on foreign languages, especially Spanish and German."

These youngsters frequently express their appreciation of authors: "I think Mr. Terhune's books are wonderful." "I owe all the authors whose books I've read a debt of gratitude."

HOW MUCH DO THEY READ?

It is well known that gifted children are great readers. In their reading autobiographies they make comments such as these: "I spend much of my free time reading," "I read more than anything else," "I spend half my time in reading," "About an hour or so a day," "About one and a half to two hours a day," "As much as possible when I have time." The writer estimates that they read from three to twenty hours per week. Only a few say that they read "very little," or "not very much."

HOW DO THEY FEEL ABOUT READING?

The following quotations express very well their attitudes toward reading and their concept of the relation of reading to other activities:

"I think reading is one of the best pastimes because it never ends."

"Compared to other activities I read about half an hour to an hour a day. I love to read and I think, given the chance, I could read for hours at a time, but of course other activities must be taken care of."

"I love to read, I read much more than I do other pleasurable recreations. To me, though, a book has to be interesting. If I get an uninteresting book, it takes me a week to make myself read a couple of chapters, but if I obtain an interesting book, I read it in a single sitting."

"I would say I spend about one fourth as much time reading as I spend in sports. I read quite slowly when I am reading for

Choral Reading*

Janet Nafe

The teaching of choral reading does not begin with the actual material to be read. Ideally the procedure starts on the first day of school when the children enter their classroom. If the atmosphere is one of friendliness and security, then choral reading becomes a natural outgrowth of the classroom experiences.

POETRY COLLECTION FOR READING

The teacher must build up an appreciation for oral reading in her pupils before she attempts the class procedure of choral reading. She needs a vast resource of ditties, nursery rhymes, verses, poetry, and selections of prose ready for immediate use.

For instance, the alert teacher will have an oral selection prepared for special occasions or days, seasons of the year, and weather conditions. Children are intrigued by the reading of a "rainy poem" as they watch the rain. Lincoln becomes their friend when they hear their teacher read "Lincoln, the Man of the People" by Edward Markham.

It is an enriching experience for children to hear poems which give beauty to everyday living. The teacher should not feel she must use dramatic gestures or the voice of an "elocutionist." It is more rewarding if she reads from the pure sense of enjoyment. She should never expound on the meaning by tearing the verse apart as she reads. However, the children should feel free to comment and ask questions.

**The Grade Teacher*, LXXI (March, 1954), 29, 76, 78.

CREATIVE ACTIVITY RESULTS

The teachers should provide ample opportunity for children to give expression to their emotions after hearing a selection. Make clay, paints, building toys, and soap for carving easily available. After children hear a reading they like, they will want to reproduce the picture they have "heard."

After hearing poetry read by the teacher and other children, the next step follows naturally. The students and teacher select their favorite poems and read them *together* after the group has become thoroughly familiar with the selection by silent reading and individual oral interpretation.

The selection should be the choice of the children. It may be a paragraph from their favorite story in the middle of reading class. It may be a "singsong ditty" composed at play, or it may take the form of an early morning prayer. The first result will not be a thing of beauty. This comes later when the group is accustomed to reading together.

Several authors have attempted to set up definite categories in which choral reading may take form. One gives six types for the sixth grade: refrain, two-part, cumulative, line-a-child, group speaking, and unison. Another contributes a list of five: unison, refrain, part arrangement, two-part or antiphonal, and line-a-child.

When teachers are exposed to such formality and methodical thinking, there is a tendency to channel the children into the same cut and dried procedure. This author

2. Allow more time for reading in class; have free reading periods. Some recommended short book reports.

3. Teach good reading methods; "make reading alive and real to the student and not something you have to learn like the multiplication table." One girl wrote:

"If I were a teacher and wanted to help my pupils to read their best, I'd encourage them to read more slowly and to try and prevent themselves from letting their attention wander from the book, but most of all I would explain to them that reading rates may be slowed down by letting the eyes reread what has already been read."

WHAT IS THE GENERAL PATTERN OF READING DEVELOPMENT OF GIFTED CHILDREN?

Gifted children usually like media of communication that give exercise to their alert minds. Books demand more thought and give more stimulus to the imagination than do media in which ideas are pictured or interpreted by the voice of a speaker.

Their reading interests are broad. When they are very young, they enjoy children's books—the boys' and girls' series as well as children's classics. They make the transition, sometimes abruptly, to adult fiction. In that inbetween stage while they are

making the transition from childhood to adulthood they like teen-age stories very much. More of these stories dealing with problems of family and boy-girl relations, vocational plans, and other adolescent interests are now being written.

They learn to read by all of the methods now in use. To some of these students the phonetic approach made a special appeal, perhaps because it helped them to be on their own in reading and was suitable to their analytical minds.

Reading contributes to the personal-social development of gifted children in many ways. Because it is something they can do well, it builds up self-esteem.

It is for them a satisfying way to use part of their leisure time. Biographies and autobiographies give them insights into the lives of other gifted persons with whom they may identify themselves. Reading helps them to develop special talents. Literature that is true to life helps them to gain understanding of human relations: why people behave as they do, how people feel when they behave in certain ways. It also helps them to understand themselves and to learn how to handle social situations and to solve or accept life's problems. Through reading, gifted children may gain a certain sense of direction and destiny, and an idea of their social responsibility.

And gather some—
They melt away.

III. RAIN CARESS

Now softly slants the rain
 In misty loveliness;
 I lift my face again
 To feel its cool caress.

IV. SPINNER OF RAINBOWS

Her twine is silvery rainfall,
 Her golden wheel the sun;
 Singing she spins the rainbow
 And when her task is done
 Lets float across the heavens
 Her *violet, indigo, blue,*
Green, yellow, orange and *red* scarf
 For all the earth to view.

V. SAILOR BOY

Splash-splash!
 Let lightning flash
 And thunder crash—
Oho!
 I've boots, raincoat,
 And a paper boat
 To set afloat—
Yo ho!

VI. PUDDLE LAND

I peeked in a puddle
 And what do you think?
 I saw *Upside-down Land!*
 Below the brink.
 When I tried to step in it—
 It shimmered away
Queer Upside-down Land!
 Why wouldn't it stay?

VII. RAIN MAGIC

Tip-tap, tip-tap, tip-tap, tip-tap!
 The rain's dance overhead

Beats its twinkling song as winking
 Sleep back I lie abed.

—*Sylvia Lee*

THE OLD OWL AND I

An old owl sat in a hollow oak.
 My hair stood straight when the old owl
 spoke,

"Whoo, Whoo, Whoo, Whoo!"

I said to the owl, "It's I! It's I!"
 But quick as a wink the owl would cry,
 And he always seemed to be closer by,

"Whoo, Whoo, Whoo, Whoo!"

He saw in the dark with his owlish eyes.
 He watched me running with great surprise.

"Whoo, Whoo, Whoo, Whoo!"

He mournfully hooted, and then I knew
 The only thing for a boy to do
 Was to wait, and question the old owl, too,
 "Whoo, Whoo, Whoo, Whoo!"

—*Mabel F. Hill*

THE TRAIN

Toot, Toot, Toot,
 Train is coming fast
 Down the railroad track;
 It will soon go past
 Like a thundercrack.
 Ring, Ring, Ring,
 See the signal arm;
 Now it flashes high,
 Wants to give alarm,
 Like a watchful eye.
 Choo, Choo, Choo,
 Now the train is near;
 Hear the whirring sound!
 Watch the engineer
 Make the wheels go round.
 Who-o, who-o, who-o,
 Now the arm comes down;
 Train is going on
 To another town—
 Wish that I had gone.

—*Madge Haines*

language. Create situations that provide meaningful participation for the child. The alert teacher does much to encourage the child through listening. As the boy or girl reads or tells a story, the children act it out and later add the words. This gives them good practice.

Using Pictures. Pictures may be used to guide the development of the speaking vocabulary. First, the teacher shows a picture of a boy and asks, "Who is in the picture?" The children reply, "It is Tom." The teacher then asks, "What is Tom doing?" The class responds, "Tom is eating breakfast." The teacher then asks, "What is Tom eating for breakfast?" To which the class replies, "Tom is eating cereal, toast, and fruit." The teacher asks, "Is this a good breakfast?" The children answer, "This is a good breakfast."

Using Experience Charts. After some practice on such sentences, the teacher writes the sentences on the chalkboard or on a chart tablet and labels the sentences "A Story about Tom." The class and individuals read the story. Many little experience charts are built in this manner and read by the class. These charts use words familiar to the children and gradually introduce the vocabulary necessary for reading books. Reading then becomes a successful venture.

As progress is made, the teacher begins to use the student's own words and sentences in the charts. These charts then serve as his first actual reading experience. The successful use of experience charts with the bilingual child seems to be in the understanding the teacher has of the different backgrounds of the children.

Using English on the Playground. In informal situations such as the play period, the child is likely unconsciously to use his first language. The teacher's role here is to remind but not reprimand or assume the role of warden. For example, while playing ball, one boy hits the ball and his team shouts, "Correli, correli!" The teachers should shout, "Run, run!" Gradually the

children will follow and often model their speech after that of the teacher.

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6. Adapt methods as the situation demands.

As an example of special procedures, consider whether or not one meaning or several meanings of a word should be presented at the same time. A workable procedure for bilingual children seems to be the stressing of only the one meaning as it arises unless the child is aware of different meanings.

Similar to procedures of teaching reading, the major goals of reading are the same for bilingual children as for children with a single language background. Good teaching may be directed toward strengthening a child's concern about and desire for reading, and guiding him in the acquisition of skills and abilities, and choosing materials so that what the child reads has meaning to him in terms of his past, present, and potential future experiences. These goals may be approached through the following steps:

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Teaching Reading to the Bilingual Child*

William R. Patterson and Eugenia Joyce

Before a child learns to read, he learns the spoken word. Thus, the teacher points to a desk and says the word, *desk*. He then points to the printed word attached to the desk and again says *desk*. The child repeats the word and answers in a complete sentence, "This is a desk." Is this the right procedure? Is it sufficient? In many instances such a procedure is not enough and a more effectual program for guiding the bilingual child in learning to read English is needed. Trying to develop such a plan concerns many teachers.

PARENTAL ASSISTANCE

In a second-grade class of children from Latin-American homes, the seeming lack of cooperation and encouragement from the home is a big problem. Too often, even when the parents can speak English to the child, the boy or girl is still expected to use Spanish in the home. Thus, the child is deprived of the essential practice needed in building an adequate speaking vocabulary.

To overcome this obstacle, the teacher holds a general meeting with parents and tries to convey to them the idea that using English informally at home is important. Following the meeting with parents, the teacher visits the homes of the children throughout the year. In addition, planned programs which are given for the parents by the class emphasize the use of English.

* *National Elementary Principal*, XXXV (September, 1955), 103-6.

FROM SPEAKING SPANISH TO READING ENGLISH

The crux of the bilingual problem is getting pupils to think in the second language. Helping the Spanish-speaking child think in English terms is difficult. Strong motivation may help. To the teacher falls the responsibility of creating in the child so keen a desire to speak and read English that thinking in this language will be the natural result.

Letting the Child Talk. No evidence from research is available on the correlation of the number of English words a child knows and his success in reading. However, L. S. Tireman, in his book *Teaching Spanish-Speaking Children*, suggests that, from his experience, 400 to 600 words seem to be a reasonable number to be mastered by Spanish-speaking children in a readiness program. Consequently, postponing reading instruction, as such, until basic vocabulary is developed supports the thesis of not permitting children to approach a task until they are ready for it.

A speaking vocabulary is learned through actual meaningful participation rather than through parrot-like repetition. For instance, let the child talk. Give him opportunities to express himself by using *show and tell* sessions, story hours, and dramatics. Praise his simplest sentence and withhold criticism. Remember that the work of putting words together to convey meaning is a feat for the beginner in any

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3. Extending skills in reading, thinking, and using language to express what is recognized, what is felt, and what is valued
4. Carrying on activities to extend the child's interest in reading and widening his background for comprehending the printed page.

TEACHER AS MODEL

The concluding suggestion is that teachers of bilingual children should be aware that they, more so than teachers of unilingual children, serve as guides and

models for their pupils. The teacher has the responsibility to meet this challenge.

To summarize, teaching bilingual children to read is not a job for the faint-hearted. All the elements of teaching unilingual children are there plus the modifications that are needed to guide them from the second language to English. Bilingual children need to be especially strongly motivated and the whole school day needs to be planned around supporting them in their efforts to learn English. Such demands call for the best in a teacher.

30

The Measurement of Listening Ability*

James I. Brown

Zeno, the old Greek philosopher, once argued the importance of listening with rather startling logic. He said, "We have two ears and one mouth that we may listen the more and talk the less."

Despite his questionable logic, Zeno was apparently right. Modern research indicates that we *do* listen more than we speak, read, or write. Yet listening is one of the most neglected areas of education today. There are over 2,800 experimental studies in the field of reading, the other receptive skill, and scarcely more than a handful in the field of listening, although research indicates that we listen almost three times as much as we read. In a sense we seem to be 8,400 studies behind time in the field of listening!

A similar situation exists in testing. *The Third Mental Measurements Yearbook*

* *School and Society* (February, 1950), 102-4.

(1949) devotes seventy pages to available tests of reading yet makes no reference to a single test of listening ability. In the measurement of listening we are, in a sense, 210 pages behind time!

Not that listening ability has never been measured. As early as 1917 an attempt was made, and from that time almost all of the thirty-some studies in the field of listening have used a test of listening comprehension. Yet the test instrument itself has received only secondary or incidental attention. In only one published study (R. G. Nichols' *Factors in Listening Comprehension*, 1948) was there sufficient concern over the test instrument to lead to an item analysis and the elimination of low or negatively discriminating items.

That brings us to the first of three questions of major importance: (1) Why should the measurement of listening re-

ceive more than incidental attention? (2) Exactly what is it we are thinking of measuring? (3) How should it be done?

The first question may be answered by making a brief survey of some of the vital problems in the field of listening, with particular regard to their broad educational implications.

There is, for example, tentative evidence that at about the seventh grade reading becomes a more efficient medium than listening for learning. Would that be equally true if specific training were given in listening as well as in reading?

There is, furthermore, tentative evidence that listening ability does not improve significantly after that time. In a recently administered listening exploratory test, it was found that high-school juniors comprehended about 60 per cent of the lecture details, college freshmen, 64 per cent. The high-school juniors scored 53 per cent right in the central-idea section and the college freshmen only 49 per cent. Is this because we *do* not or *can* not teach listening?

Coleridge's notion of superior listening is apropos here. When he wanted to describe intent listening in *The Ancient Mariner*, he did not speak of a serious-minded adult but of a young child. It is the waylaid wedding guest under the spell of the mariner's glittering eyes who "listened like a three years' child." Does formal schooling dull our early acquired listening skills? The following data tend to suggest as much. In a study by Rankin, fifth-grade pupils comprehended 73 per cent of what they heard; in the study by Nichols, college freshmen comprehended only 68 per cent of what they heard.

There is tentative evidence that we are less critical when we listen than when we read. Is that because we have not been taught how to listen critically? Or is a speaking situation inevitably and by its very nature a situation that encourages uncritical reception?

There is tentative evidence that difficult material becomes more difficult when lis-

tened to than when read. Can we ever hope to develop sufficient listening ability for the understanding of difficult material?

And lastly, there is tentative evidence that for average and below-average students listening is more efficient than reading. Should secondary education be both reading and listening centered? Should sectioning and class assignments be re-ordered around this difference?

Consider the implications of such tentative evidence in terms of our ideal of education for *all* American youth and in terms of such movements as Education for Life Adjustment or General Education. Perhaps our reading-centered education will never adequately meet the needs of *all* American youth. Perhaps there must be a double emphasis, a reading-listening emphasis. Perhaps for terminal education there should even be a strong listening emphasis.

All this is, of course, almost pure speculation. The fact remains that the most frequently engaged-in language ability in our democratic society is the one about which we know least. We still do not know with a sufficient degree of positiveness the answers to the basic questions: Can listening be taught? and How can it be done?

For example, the most complete bibliography on listening, prepared by H. A. Anderson, chairman of the Listening Committee of the National Council of Teachers of English, a bibliography of slightly over a hundred references, does not list a single completed study that offers objective statistical evidence that listening can be taught. There are, to be sure, articles which suggest that it can and should be taught. There are even a few articles which describe how it is being taught, but the results are in general and subjective terms.

The specific answers to these and similar questions depend upon accurate research, which in turn is dependent upon the use of accurate measuring instruments. That brings us back to the essential need for adequate measures of listening ability, for it

is by means of such measures that we may eventually come to a needed understanding of the whole listening process.

Testing instruments are equally necessary in answering the second question: Exactly what is it we are thinking of measuring? We are not interested here in a dictionary definition or armchair theorizing. A more specific answer is desired. For one thing, is listening a simple or a complex skill?

It seems reasonable to assume that listening and reading are probably closely related skills and that listening is therefore probably complex. Acting on that assumption we asked eleven experts in the field to rate certain characteristics which might possibly be important facets of this thing called listening. The following statement incorporates, in order of rated importance, the top five characteristics chosen.

Good listening was defined in such terms as the ability to (1) synthesize the component parts of a speech to discover the central idea or ideas; (2) distinguish between relevant and irrelevant material; (3) make logical inferences from what was heard; (4) make full use of contextual clues; (5) follow without loss a fairly complex thought unit.

To check the assumption of listening complexity, tests were devised to explore separately these five characteristics and were administered to a sampling of high school juniors and college freshmen. A tentative analysis of the data seems to corroborate the belief that listening is a complex activity. A majority of the individual test profiles showed extreme variations. For example, the same student might be both a good and poor listener, depending upon the particular abilities noted. Some students in the top fourth with respect to getting the central idea were much below average with respect to other characteristics. Generally speaking, the ability to make inferences or to distinguish between relevant and irrelevant material was not as well developed as the ability to get details. As yet,

of course, it is impossible to say just how many relatively separate parts there are in this thing called listening.

A whole series of such exploratory testings is needed to give this concept more definite form. Then we should be in a much better position to know exactly what particular aspects of it are most likely to be amenable to improvement.

And now the final question: How is this measuring to be done? Three variables deserve particular mention, the reading, difficulty, and intelligence variables.

For one thing, it seems important that we get as pure a measure of listening as possible. For example, if we measure general intelligence with a reading-type intelligence test, our measure of intelligence also reflects to a degree silent-reading ability. The correlation between reading and intelligence, as measured by a reading-type test, is about .60. The correlation between reading and intelligence, as measured by a non-reading-type test, is only about .25. To that extent does a reading measure of intelligence reflect general reading ability.

We would not think of measuring a person's reading ability by using an intelligence test or a listening-type test. Why then should we think of measuring a person's listening ability by a reading-type test? To insure as pure a measure of listening as possible, other things being equal, listening ability should be measured by a listening yardstick.

Difficulty is the second variable. There should be a definite awareness of its importance in the listening process. Actually what we need in the field of speech is a "listenability" formula similar to the Flesch readability formula used for calculating the difficulty level of a piece of writing. Apparently the readability formula does not measure listening difficulty accurately. Tenth-grade reading matter, for example, is apparently about twelfth-grade listening matter.

The third factor, intelligence, is mentioned largely to raise a very important

question relative to a large amount of research in speech as well as to the measurement of listening. In the research in the field of speech involving the comparative study of equated groups, the practice has been to equate on the basis of intelligence, the assumption being that equally intelligent groups would be of equal listening ability. Now in similar studies in the field of reading, the equating of groups is done primarily on the basis of silent-reading ability, not intelligence. Since we know experimentally that groups of equal intelligence do not necessarily read equally well, that brings into question the assumption that groups of equal intelligence listen equally well. This factor is one that de-

serves further careful consideration and examination.

Finally, it may be said that listening is one of the most profitable fields of research. There are special educational implications for the fields of speech and English as well as for all subject-matter fields where oral instructional methods are important, not to mention the important political, social, and mass-communication implications.

And basic to all such research is the problem of measurement. Appropriate test instruments for all purposes and for use at all levels must be developed if we are ever to reach a needed understanding of this most neglected of communication skills.

31

Mental Maturity Versus Perception Abilities in Primary Reading*

Sister Mary James Harrington, S.C.L., and Donald D. Durrell

There appears to be great confidence in mental age as a basis for beginning reading. It is often assumed that a mental age of six is the minimum for success in reading, and that later progress is closely allied to mental age.

On the other hand, there is growing evidence that success in reading rests more on specific backgrounds of perceptual abilities, and that these are relatively independent of mental age. Among the background abilities that have been shown to be related to success in reading are the follow-

ing: visual and auditory perception of word elements, and ability in phonics.

It seemed desirable to study the relative influence of mental age and the various perceptual factors on reading, using a single population, and evaluating each factor free from the effects of the others. Such a study should provide light on the following questions: how much of reading success depends upon:

1. Visual discrimination of word elements, required for "look-and-say" reading?
2. Auditory discrimination of word ele-

* *Journal of Educational Psychology*, XLVI (October, 1955), 375-80.

ments, which provides the basis for phonetic reading?

3. Phonics—the attachment of sounds to letters and blends, now coming again into favor.

4. Mental age, the general ability commonly used in educational prognosis?

The second grade at the end of the year seems the most appropriate place to evaluate these factors. Reliable measures were available for the various abilities, the intelligence test used required no reading, and the reading vocabulary was small enough for fairly precise measurement. At this stage, too, school instruction plays a relatively large part in reading growth as compared to independent reading.

Reading achievement was measured by two tests: an oral reading test and a silent reading word classification test. Both were measures of reading vocabulary rather than comprehension, since the factors studied are presumed to be related to growth in sight vocabulary. The oral reading test was a story which contained 136 unrepeatable words from the basal text used by the pupils, *The Cathedral Basic Readers*. The reliability of this measure, obtained by the split-half method and corrected by the Spearman-Brown Formula, was .98. The word classification test was built upon words not necessarily in the basal readers, but in the Dolch list of "First Thousand Words of Children's Reading." It required the child to read the word silently and put it into the proper classification of meaning. This test correlated .80 with the oral reading test.

Visual discrimination was evaluated by showing the children a word on a flash card and having them identify it from memory by drawing a circle around it in a multiple-choice situation. The reliability of this test, computed by the split-half method and corrected by the Spearman-Brown formula was .80. The auditory discrimination test measured the child's ability to notice initial consonant sounds, rhyming at the ends of words, final con-

sonants, and a combination of initial and final consonants in words spoken by the examiner. This test, designed and evaluated by Doris E. Nason, required the child to circle words to indicate his knowledge of the stimulus sounds. The split-half, corrected reliability of this test was .90. Ability in phonics was measured by an individual test which asked the child to give sounds of letters, consonant blends, and to show a knowledge of the influence of the final silent "e" on word pronunciation. This test had a reliability of .98, obtained by the split-half method and corrected in the usual manner.

Mental age was measured by the *Otis Quick Scoring Mental Ability Test, Alpha, Form A*. This is largely a measure of ability to understand oral language and to follow directions given by the examiner.

All tests were administered by the first author, and were given to five hundred children in the parochial schools in the Archdiocese of Boston. The children represented a wide range of economic status. All of the schools gave training in auditory and visual discrimination of word elements, and all had a formal or semi-formal program in phonics.

The primary technique for analysis of the influence of each of the factors independent of the others was that of pairing children who were nearly equal on each of three variables, but markedly different in the variable being studied. When the influence of phonics on reading was being studied, for example, 161 pairs of children were found who were equal in mental age, in visual discrimination and auditory discrimination, but one child in each pair was superior to the other in phonics. The technique of pairing always required the children to be within one-half standard deviation on the controlled factors, and more than one standard deviation apart on the independent factor.

Table I illustrates the results of pairing children to determine the effect of phonic ability on reading achievement. This table

TABLE I. RESULTS OF MATCHING 161 PAIRS OF CHILDREN TO DETERMINE EFFECT OF PHONICS ABILITY ON READING ACHIEVEMENT

Variable	Mean of High Group	Mean of Low Group	Difference of Means	S.E. _{diff}	Critical Ratio
Phonics	45.30	17.96	27.34	1.03	26.54
Mental age	97.93	97.46	.47	1.38	.34
Auditory	27.12	26.79	.33	.73	.45
Visual	22.38	21.89	.49	.39	1.24

is typical of the pairings for the various factors. The means of the controlled variables seldom showed a difference of one point of raw score. The difference of the means of the variable being studied was always large, usually more than one and one-half standard deviation.

If the factor being studied has a high influence on reading, the higher children in the pairing should have a higher mean score in reading than the low group. If, however, the factor is of little importance in reading, the two groups should show approximately equal scores in reading.

Table II shows the results of the pairings and the influence of each factor on reading achievement. The factor being studied is indicated by the pairing data being placed in italics.

All three perceptual factors were found to be significantly related to reading achievement. Auditory perception made a difference of 18 words in mean reading score; visual perception, a difference of 32 words; phonics, a difference of 33 words. Apparently each has a significant place in the word analysis program, and each makes a distinct and different contribution

to progress in developing a sight vocabulary.

Mental age, however, had little influence on success in reading achievement. The high group had a mean mental age of eight years and nine months as compared to seven years three months for the low group; the two groups were equal in the other perceptual abilities; the difference of a year and a half in mental age produced only a difference of three words in reading vocabulary.

A possible explanation for this lack of influence of mental age may be found in the fact that the mental test used is primarily a measure of oral language comprehension. This is the major element measured in most primary grade intelligence tests. It is likely that even the duller children who come to first grade have a speaking and listening vocabulary adequate for success in first grade reading, and that additional language fluency does not greatly enhance the rate of acquiring a reading vocabulary in primary grades. The minimum estimates of speaking and listening vocabularies of beginning first graders are 2,500 words or above. Since only 500 words are

TABLE II. RELATION OF VARIOUS FACTORS TO READING ACHIEVEMENT

Variable	No. of Pairs	Reading											
		Auditory		Visual		Phonics		Mental Age		Scores			
		High	Low	High	Low	High	Low	High	Low	High	Low	Diff.	C.R.
Auditory	106	34	24	20	20	34	33	93	93	192	174	18	2.7
Visual	134	31	31	34	17	34	34	95	95	205	173	32	5.8
Phonics	79	28	28	19	19	38	11	94	94	180	147	33	4.1
Mental age	107	31	31	21	21	31	31	105	87	192	189	3	.5

Figures in italics indicate the factor being compared to reading.

taught in the first grade, and since the more difficult basal readers rarely present more than 1,800 words in the first three grades, it should not be surprising that the relationship between most current primary grade mental tests and reading achievement is low.

A partial correlation study using the entire population of five hundred children confirmed the findings of the paired comparison study, with the minor exception that visual discrimination showed a higher correlation with reading than did phonics. The zero-order correlations with readings for the four factors were as follows: visual discrimination, .64; phonics, .56; auditory discrimination, .54; mental age, .23. Partial correlations were as follows: visual discrimination, .45; phonics, .32; auditory discrimination, .26; mental age, .000.

Since the findings in regard to mental age and phonics are of particular interest, it seemed desirable to repeat the study on a larger population with a wider geographic distribution. Through the cooperation of Sister Mary Brendon, RSM, of Arkansas, Sister Mary Hortense, RSM, of Oklahoma, Sister Catherine Marie, SCL, and Sister Ann Lorraine, SCL, both of Kansas, the study was repeated in the several states.

The same tests and statistical procedures were used with a population of 1,000 children at the end of the second grade. The larger number permitted pairings more than twice the size of the initial Boston study. The findings of this larger study are presented in Table III.

In the data from the midwestern states, the factors relate to reading in the same order as in the Boston study. The one marked difference is in the influence of visual perception, where the difference between the high and low group was only six points, resulting in a somewhat lower influence of the factor in the reading score. The midwestern mental ages ran somewhat higher, permitting a greater difference between the high and low pairs in matching. Here a difference of thirty-one months of mental age, or two years and seven months, made a difference of only six words in the mean reading scores.

Referring to the questions stated at the beginning of this article, the findings of these studies are as follows:

1. Auditory and visual discrimination of word elements have high importance in success in acquiring a primary grade reading vocabulary.

2. Phonics instruction is clearly important, having a higher relation to reading achievement than any of the factors studied.

3. Mental age, as measured by the test used, has little influence on success in learning to read.

It is clear from the nature of the pairing that many children who are high in mental ability score no higher than those of low mental ability in the background factors that make for success in reading. This study indicates strongly that specific instruction in phonics and in visual and auditory perception of word elements is essential to success in building reading vocabulary in primary grades.

TABLE III. RELATION OF VARIOUS FACTORS TO READING ACHIEVEMENT (MIDWESTERN STUDY)

Variable	No. of Pairs	Auditory		Visual		Phonics		Mental Age		Reading		Diff.	C.R.
		High	Low	High	Low	High	Low	High	Low	High	Low		
Auditory	265	36	24	24	23	40	39	102	101	206	185	21	6.4
Visual	340	32	31	27	21	41	39	104	104	207	184	23	7.4
Phonics	161	27	27	22	22	45	18	98	97	189	160	29	6.1
Mental age	283	32	31	24	24	40	40	122	91	204	198	6	1.6

Figures in italics indicate the factor being compared to reading.

Perspective on Reversal Tendencies*

Edna Lue Furness

Strephosymbolia—twisted symbols—is a term used to designate the tendency certain individuals have to reverse letters, parts of words, or even whole words. This inversion tendency is not limited to seeing words in reversed order, or writing letters backward or upside down. "It may be observed occasionally in the very young child who has difficulty in putting on his garments the right way; who fails to remember right and left distinctions; and who loses his bearings within his own home when looking for something he knows is in a certain place." In many clinical cases the condition seems to constitute the only factor involved in being unable to read, to speak, and to write.

The intent of this paper is to show the evolution of thought concerning reversal tendencies in language and to call the attention of teachers to several aspects of remedial work in letter reversals.

There are several types of reversals. One type, the "static reversal," comprises the reversal of letters showing right-left symmetry (*p* and *q*, *b* and *d*). Another type, called "kinetic reversal," is characterized by a reversal of the sequence of letters in words, e.g., *was* for *saw*. Still another type of reversal is termed "composition." Helen Kennedy lists eight types of transpositions that may be identified:

1. initial letter to an internal position
2. initial letter to terminal position

* *Elementary English*, XXXIII (January, 1956), 38-41.

3. terminal letter to initial position
4. terminal letter to internal position
5. internal letter to a different internal position
6. internal letter to initial position
7. internal letter to terminal position
8. miscellaneous changes involving several of the others or more than one letter

Kinetic reversals, static reversals, and transposition of words in a sentence occasionally are associated with facility in mirror reading. The reader will recall the case of mirror writing as described by Alice in Wonderland, who was puzzled by Jabberwocky in reverse. She related more truth than fiction when she said, "Why, it's a Looking-glass book, of course! And, if I hold it up to a glass the words will all go the right way again."

If we glance back into history we note the case of Leonardo da Vinci whose biography reads like that of a school boy most likely "not to succeed." This genius at mathematics, inventions, and art was a mirror-writer, left-handed, had difficulty reading names, knew no Greek, and could not learn Latin. "Leonardo was reputed to write his compositions in a reverse script, which can be read only in a mirror—not from left to right, as all do, but from right to left as they write in the Orient. People said that he did this to conceal his criminal, heretical thoughts about nature and God."

With the birth of biological sciences, particularly genetics, this type of thinking

concerning certain children who have a more or less selective difficulty in learning to read and write underwent a change. Some earlier observers assumed that the reversal tendency was related to a general mental defect and they described such cases as partial imbeciles. Samuel T. Orton reports that "a more or less complete inability to learn to read, particularly when it is associated as it often is with atrocious handwriting and poor spelling, naturally enough would incline the uncritical observer to assume that the child was, if not truly defective, at least not as bright as he should be to accomplish his school tasks."

In spite of this prevailing attitude, case reports of children who were obviously bright in most respects but who could not learn to read or who progressed in reading with the greatest difficulty, came to the attention of authorities. In 1896, Kerr, an English school physician, and Morgan, an English ophthalmologist, published independently case reports of reading disability of children whose intelligence was normal. Morgan considered the reversal tendency a specific disease entity and called it "congenital word blindness." This use was suggested by the similarity between this difficulty and that of persons who had lost the capacity to read because of disease of the brain and who were known as cases of acquired word-blindness. In such cases destruction of a small part of the brain by an injury, a tumor, or a hemorrhage is the cause of a practically complete loss of the power to read.

A second English ophthalmologist, Hinshelwood, attempted to divide poor readers into two groups. He restricted the term "congenital word blindness" to the really grave cases of mental defect, which manifestly are the result of an abnormal or pathological condition, and which prove refractory to all ordinary methods of school instruction. The other group comprises those who are merely slow in learning to read and whom he rated as physiological and hence not as disease cases.

In 1925 Samuel T. Orton, a well known neurologist, aroused particular interest in the reversal type of error so frequently made by the so-called non-readers; he advanced his neurological theory based upon assumptions concerning conflict of impressions made upon the two hemispheres of the brain or lack of, or confusion in, cerebral dominance. In his opinion, the difficulty is not the result of a general mental defect. He found that the condition often corrects itself; and he called this striking tendency to distorted order in the recall of letters, "strophosymbolia."

Dr. Orton explains the reversal tendency in the light of well known facts of brain anatomy: that the right hemisphere of the brain controls the left side of the body, and the left hemisphere controls the right side of the body. It is assumed then that the inactive (or non-dominant) hemisphere is stimulated as freely as the active (or dominant) side and that such stimulation leaves memory traces, or engrams, behind it in the nerve-cells of both hemispheres. When the right-sided person reads, only the memory traces on the dominant or active side are stimulated. When the left-sided person reads, the right hemisphere is dominant. The individual who reverses letter parts, such as *gary* for *gray*, or whole syllables, as *tar-shin* for *tar-nish*, or the major parts of words, as *tworrom* for *tomorrow*, is an example of one who lacks a consistent dominance of one side over the other. According to Dr. Orton, the failure to establish the normal physiological habit of using exclusively the memory traces of one hemisphere may easily result in a confusion in orientation, reversal errors, and hence difficulty in learning to read and spell.

The idea of word recognition being due to impressions stored up as copies or images or as engrams literally etched in one hemisphere in one form and in the other in mirrored form is unaccepted by most psychologists. So, while Morgan, Hinshelwood, and Orton were trying the first fur-

row in the field of "congenital word blindness" and "strophosymbolia," several psychologists were cultivating the field from the other direction, and testing the theory that it is a natural phenomenon for very young children to read words backward and that they learn to perceive words as adults do as a result of increasing maturity and experience.

One of the first psychological studies is by Lucy Fildes, whose research shows that mirror or reversed writing is commonly found among young children. She states, "There seems to be no doubt that the tendency to reverse letters is only part of a larger tendency, especially among young children, to recognize forms without apparent heed to the position which they occupy in space."

Another study is that of Nila Banton Smith. She investigated the ability of children to select from a number of letter symbols that one which was identical with a sample shown by the child. Dr. Smith found that her brightest group showed the least confusion and made the fewest errors; the average group had more difficulty and made more errors in matching; and the slowest group made some kind of error on every letter in the alphabet.

A later study which indicates that the tendency to confuse form and position is not a "sporadic abnormality" is that of Gertrude Hildreth. In her study of reading and writing reversals of public and private elementary school children under standard test conditions she found a decline in frequency of the tendency in higher as contrasted with lower grades. Also she found that the number of reversals made by children declines from grade to grade with no attention to reversal elements as such. Interestingly enough, she found that laws of association and configuration explain many

reversal errors. Her evidence prevents a conclusion that reversal tendency is a cause of poor reading.

Confirming the work of Smith and Hildreth, Helen Kennedy in a recent study concludes that the tendency to reverse and confuse symbols is perfectly normal in the earliest grades and that it is equally normal for the tendency practically to disappear as the child progresses through the first several grades.

The question may arise as to what the teacher should do when the tendency persists. The first question may be answered in this wise: certain educational experts advise that we just wait until "certain general and specific maturations have engendered a condition in which reversals are few." The second question may be answered by reporting that remedial instruction involving controlled stimulation of unilateral eye coordination can be provided through the employment of a conditioning device now available. Its trade name is the Hand-Eye Coordinator; and it is manufactured and distributed by Keystone View Company, Meadville, Pennsylvania. Research has proved that this device is "an effective therapy in the elimination of reversals and frustrations with resultant improvement in the functional skills of the several language arts."

The evolution of the attitude toward reversal tendencies in reading and writing is a fascinating story. The evidence seems to indicate that in the course of the centuries this tendency has been associated with heresy, with imbecility, with cerebral imbalance, and finally with normality—in cases where the tendency practically disappears, and where the tendency may be corrected by a technical device. "Mirabile dictu"!

The Case for the Kinesthetic Method*

Dorothea P. Shea

Kinesthetic teaching and learning are as old as education itself, but their significance, and consequently their practice, has often been lost in the modern school. Dr. Grace Fernald made a study of early Roman schools and found that, although they had other problems similar to those of modern education, the problem of the non-reader simply did not exist; she also found that one technique of sand tracing was unique in ancient schools and unknown in the modern. She thereupon introduced sand trays into her reading clinic and broke many stubborn nonreading blocks. Her practice was a simple one. The child traced a word in sand from a copy while saying the word aloud. He then used the word in his own sentence or story, and the teacher wrote from his dictation. A type-written copy was prepared for the following day, and the pupil read aloud his story. Variations of this procedure are many, both by Dr. Fernald and by her followers. But the general acceptance of the procedure was stopped by the frequent but invalid complaint: kinesthetic devices are too time-consuming. Nonetheless, under many guises, kinesthetic techniques are coming into use in our present-day schools. In essence, activities programs are extensions of kinesthetic devices and rest for their success on the same laws of learning.

School psychologists are now raising questions to be answered by educators. To-

day, performance intelligence scores are an integral part of many group and individual tests of ability, but the application of performance intelligence has not been generally adapted and applied in the modern classroom. Fifty years ago the classroom could safely be based on academic procedures, for community living constantly supplemented, in kinesthetic devices, the academic procedures of the school. Two pints make a quart, but what child today needs, in order to provide for his daily life, to know kinesthetically through his own experiences how two pints may become a quart? Flour is bought in compact packages for cake or bread, not in bags or barrels, and paint is purchased at the suggestion of the storekeeper, usually in a can sufficient for a specific task. These common examples may be multiplied many times. As a result, every child has performance abilities which are going unchallenged and underdeveloped.

KINESTHETIC DEVICES

Dr. Fernald's sand-tracing device has developed into the practice of tracing from a copy of the printed or written word with the index and middle fingers while saying the word aloud. Here all the media of learning are used: the visual, auditory, motor, kinesthetic, tactile and articulatory. The child traces until the word is known. The speed of learning is accelerated if the concept of the word is understood and if the word has been dramatized and used in

* *The Grade Teacher*, LXXIV (October, 1956), 60, 108, 110.

a sentence structure or related to experience.

Pupils who have marked learning difficulties or who are just beginning to read find both pleasure and profit in clay writing. Plasticine clay is rolled into thin strings, and the letters are formed by being laid over a printed or written model. The most difficult reading blocks are broken with this device. Strangely enough, behavior problems become less stringent when children are introduced to clay writing.

Similar results have been obtained from writing with wire. The use of wire is particularly valuable in preventing and correcting reversals. If the child is acquainted only with manuscript writing, the wire must be cut into small lengths of varying sizes, usually one-half inch, three-quarters inch, one inch, an inch and a half and two inches. The child then shapes the lengths and combines them to form the letters of the word. If cursive writing has been learned, a length of readily flexible wire about a yard long may be used. The wire should be placed over the written word (about two inches in height) and shaped with the fingers. As the pupil gains skill, he may form the word while looking at the written copy. Wire writing is of great assistance in stubborn cases of reversals, but if the child persists in reversing the wire writing, a deep emotional block should be suspected as the cause of his reading difficulty.

TRACING

Tracing at the chalkboard takes many forms. (Note: The chalkboard is better used by the pupils than the teacher!) The word to be learned should be written or printed in large letters on the board. The pupil then traces it rapidly, saying the word aloud, until he has learned it. The tracing may be done with the fingers or with chalk. As the pupil gains facility in learning, his writing rapidly falls off in size. Frequently, tracing a word three

times is sufficient for learning, although the pupil in the beginning may have had to trace interminably.

Writing a word with the fingers on a desk or table is a good classroom device. Tracing a word in the air has less value, as there is little tactile sensation, and one area of learning is lost.

Tracing on paper is also valuable in the classroom. The list of spelling or vocabulary words should be prepared by the teacher with the words presented at least four times average size. The pupils should trace with the fingers or with a pencil saying the word aloud and repeating the process until the word is learned. The child should not go on to the second word until the first is learned.

APPLICATION OF DEVICES

As a medium of learning in the primary grades, their value is easily seen in the acquisition of a basic vocabulary. As another means of learning, they can be used to teach children to read phrases and sentences. Every first grade teacher knows that children learn to read most easily from a chart and from flash cards, but the transition to the book of identical phrases and sentences is often difficult. One or two lessons in finger tracing on the chart or flash card is sufficient to effect the transition. In teaching phonics, the task is simplified if the group is taught to trace the letters while participating in the phonic drill. It is at such times that finger tracing on desk or table is most valuable.

In the intermediate and upper grades, kinesthetic devices are necessary for many pupils in spelling and vocabulary drills. Even the poorest speller makes marked progress tracing his words at the chalkboard or on paper. Once the words have been learned, the regular classroom procedures of word study can be followed, and frequently the pupil can make a transition from tracing to the more common procedures of study without reliance on the rudimentary kinesthetic device.

Tracing also has its place in the study of geography, history and science. The pupil with a reading disability is at a disadvantage in these subjects for he must often rely on listening as a page is read by another pupil before he can participate in classroom discussion, and in a written lesson he is soon at a loss. The solution to the problem may be found in the following account of an experiment in a fifth grade geography group.

The lesson was presented by the teacher and the materials read and discussed by the class. While the secure readers went on to additional reading and other activities, the slow readers worked with the teacher. A review of the unit was made by reading the captions under each picture in the text. The meaning and significance of the picture and caption were discussed. Then geographical words were selected and traced at the chalkboard, on paper or under the teacher's supervision with finger tracing on the desks. When the necessary vocabulary was learned, these pupils made their special contributions to the class by making models, charts, maps, and even written stories. Many of them placed as well or higher than the child with equal intelligence on unit and yearly achievement tests; all of them had scores in geography commensurate with, or higher than, their average scores in reading.

In another room an eighth-grade science teacher divided his classes into two groups—the accelerated group which could progress independently and the average group which worked with him. The average group studied charts, diagrams and pictures, reading the captions and choosing unknown words for study by tracing. Special scientific terms were traced also. Charts and diagrams were traced or copied, and the parts carefully labeled. Only after the basic scientific terms were understood and learned for use in reading and writing was the text read and the written questions answered. Whenever possible, activities projects were substituted for additional read-

ing lessons, but labeling accurately was an integral part of each project. In the testing situation at the close of the unit, the test was planned to include the naming of the parts of a given diagram and went on from there into simple verbal questions and usually ended with a paragraph to be written only by competent academic students.

Many teachers find themselves confounded by the fact that pupils, though at similar levels of intelligence, may be at markedly different levels of achievement. Some psychologists have regarded this as a phenomenon to be associated with evidences of emotional stability or instability; few psychologists or teachers have examined the factors of intelligence which might give the key to the differences in achievement. Anthropologists have made the statement that as man learned to use his hands, the size of his brain increased. David Wechsler in his *Measurement of Adult Intelligence* stated that the adolescent who excelled in performance skills might fall into the classification of a delinquent, and the one who excelled in verbal skills might become a neurotic. But these scattered facts considered in relation to child growth and development can bring more constructive conclusions.

Physically children grow unevenly. Some short, fat children become suddenly tall and slender. Some five-year-olds lose their baby teeth; others wait until they are seven. Some grow first in the size of feet and hands and others in the length of arms and legs. If this evidence before our eyes is genuine, should we not suspect other types of growths, such as mental or neurological, to be equally uneven?

KIND OF LEARNING

Some children learn better through the eye and ear and need kinesthetic and activities projects only to indicate their ability to apply their abstract knowledge. Other children need simply a longer period of application of concrete situations to ab-

stract learning. They will drop kinesthetic devices of their own volition when they no longer need them, but they will learn faster if allowed to retain concrete or kinesthetic devices until the transition to abstract learning has taken place. But a third group will always need concrete learning and kinesthetic devices and will always perform best in activities.

The small child must be able to hold his world in his hands. We accept the wonder of the infant who experiments with size through handling objects; the preschool child learns speed and distance in running and in riding his kiddie-car; the first grader refines this acquired knowledge in the classroom and learns the printed symbol for his concepts. But if the first grader has a nervous system that learns best by touch and by motor activity, his teacher is disturbed because so little has been discovered about kinesthetic learning, and she may fail to recognize his ability. The interesting fact that the anthropologist learned about man's brain expanding with

the increased use of his hands has not been conscientiously applied in the classroom nor has the teacher learned that David Wechsler's findings can be easily discounted; for if the child of high performance skills is allowed to learn through kinesthetic devices, he might not become delinquent, and if the child of high verbal skills learns to apply his knowledge concretely he might not become a day-dreaming neurotic.

Kinesthetic learning is not the panacea for all learning difficulties, but its full implications have not been studied because such learning has not been thoroughly investigated for method, technique and application. Undoubtedly the greatest handicap to such study has been the belief that kinesthetic learning is a thing apart and cannot exist side by side with the academic, but once this is dissipated, kinesthetic learning bids fair to come into its own in a happy and united relationship with all learning forms.

34

Interest—A Key to Reading Retardation*

Delwyn G. Schubert

"No" is the answer a retarded reader invariably gives when asked if he enjoys reading. Needless to say, pupils who aren't interested in reading read few books. Any child who curtails his reading activity becomes more and more retarded in his reading. It is impossible to become a good swimmer without swimming; likewise, it is impossible to become a good violinist

without playing the violin. By the same token, it isn't possible for a child to become a proficient reader if he does not read. This explanation is undoubtedly fundamental to many cases of reading retardation.

Why do so many children become uninterested in reading? It's much like the well known fact that mixing cod-liver oil with a child's orange juice is a sure way to bring about an aversion for the latter. The

* *Elementary English*, XXX (December, 1953), 518-20.

Success in Remedial Reading*

E. W. Dolch

After one has followed closely the remedial work that has been done with hundreds of poor readers, he begins to see emerge a recipe or formula for success in this most important work. He begins to see that cases which have been handled according to this recipe or formula have shown quick and marked improvement. He also sees that cases which have not been so handled, did not show improvement, or at least not the improvement that the conditions would lead us to expect.

Knowledge of this recipe for success in remedial reading is enlightening in many ways. It enables us to explain why some measures succeed and others do not. It enables us to understand what went wrong in particular cases. It can tell us how to direct our efforts, regardless of the particular techniques we are trying to use. The reason that this recipe for success is so helpful is that it tells what remedial work means *from the child's point of view*, not from the point of view of a teacher or of a clinic. Efforts which accord with this "child-point-of-view" get results with the child; those which do not so accord cannot get results unless some very special circumstances prevail.

The three requirements in the Recipe for Success in Remedial Reading will be presented and discussed in order.

1. RESTORE THE CHILD'S SECURITY

Every case in remedial reading is a case of failure. Every case of failure means

* *Elementary English*, XXX (March, 1953).

defeat to the child, and as a result, a feeling in the child of fear, frustration, and insecurity. Every successful remedial reading teacher sees to it from the very start that, during the remedial reading session at least, this fear, frustration, or insecurity is removed. When the child is with this teacher, he feels relaxed and confident. He feels that he has things to be proud of. He knows he can learn and can succeed.

Of course the good remedial teacher achieves this end, first, through her hearty acceptance of the child as a friend and a worth-while person. She discovers the child's real interests and talks about them. She lets the child teach her some things which he knows better than she does. She makes the period a happy time, so that the child comes to it eagerly, and so that he is greatly disappointed if he must miss a remedial session.

This first requirement of the Recipe for Successful Remedial Reading points immediately to the cause of failure in most remedial reading classes. Many of these classes are set up in such a way as to be, in effect, "dummy classes," where all are marked as failures. The children hate such a class, and they hate the teacher and the work and everything about it. Some few teachers can overcome this usually impossible situation and secure an atmosphere of friendliness, confidence, and "eagerness to be there," but these teachers are very few indeed. The moral from this situation therefore must be that if a remedial class cannot immediately "restore the child's

security," it is much worse than no class at all.

This requirement of the Recipe also explains why remedial work is usually a failure when teachers are "assigned" to it. We may be able to assign teachers to Geography or Language or Arithmetic and get generally satisfactory results. But telling unwilling teachers that they are to be remedial teachers is simply setting the stage for failure. No teacher can "restore security" to failing children if she does not respect and like those children and if she does not feel glad to throw herself and all her capacities into the work of rescue of the children from their fear and insecurity. Such a rescue gives satisfaction that can hardly be found elsewhere. After a teacher has seen a defeated, stubborn, or resentful child open up into a frank, confident, friendly one, she never regrets the patience and kindness and genuine friendly interest she has invested in the case. But unwilling teachers do not get this success unless they are willing to give themselves to it for at least a trial.

2. DISCOVER THE CHILD'S "AREA OF CONFIDENCE" IN READING

The typical remedial case in reading is in a confusion which has resulted from years of attempted teaching. The child knows odds and ends of words, scraps of sounding knowledge, has more or less guessing ability, has all sorts of habits of omission, insertion, skipping, and the like. But in this confusion there is no confidence. The child may get something right, but he is never sure what he can do or cannot do. A child in such a condition will sometimes attempt anything, and at other times he will attempt nothing. He may have good days and bad days on which his performance varies tremendously because of the variation of confidence or fear from one time to another.

Such a state of confusion furnishes no basis for remedial reading. Instead, we need to discover just what a child is sure

he knows; and just what knowledge he can use without trace of fear or insecurity. Sometimes we find that a child seems to know several hundred words, but in a vague and insecure manner. After we eliminate the words he is largely guessing at, we may find he is down to less than a hundred. Then we try to speed up his recognition and find that half of these he does not know positively and surely. Finally we may find that there are fifty words that he knows surely, correctly, and all the time. We cannot fool him on those words. He knows he knows them and rattles them off. That, then, is this child's "*area of confidence*" in reading.

With another child, the common words may be no problem but he has a lot of confused knowledge of sounding. If you give him time and allow all sorts of guessing, he seems to do very well. But when he is not confident, he starts calling letters and letter combinations all sorts of things, or he gets the letters right but makes the strangest words out of them. What is his "*area of confidence*" in sounding? We watch his sounding in reading, we test him out on the sounding elements, and finally come to the conclusion that all he is really sure of is the beginning consonants. If all we ask is how a word starts, he is sure of the answer. So that is all we expect at the moment, because we want him to be working at the start only in his "*area of confidence*."

The reason for this step is already apparent. We want the child to be happy and confident in his reading. We want him to be eager to attack reading. To secure this end, we must remove his fear, his feeling that "he cannot read." So we find out the area in which there is no fear. We practice in that area. We ask him to recognize only words he knows; or we ask him to sound only the elements he can sound with sureness. We keep in this area at first. Pretty soon, the child says, "Why, I can read." Of course he can, within his area of confi-

dence. We want him to go on, but he must practice in his area of confidence first.

Here we see the explanation of a vast amount of failure in remedial reading. First of all, so many teachers refuse to go back to the area of confidence. If the child can read with confidence only at second grade level, they still give him a third grade book. If a child "knows something" about sounding, they ask him to sound out every word he meets. In short, they are unwilling to "go back to where he is." Going back to where he really is, is the first rule for remedial reading. Without it, the child does not begin with an area of confidence. He continues the fear and insecurity with which he came to us. Then the chances of success are few.

In the second place, so many remedial teachers, even when they discover the area of confidence, immediately leave it for something new. They discover the words a child knows, and immediately begin teaching him new ones. They find what sounding he is sure of and immediately try to teach a whole series of new principles. The purpose of finding the "area of confidence" is to build confidence, and you cannot do so unless you *stay in that area* for a considerable time. The child must find immediate success and pleasure in his work, and that success and pleasure must continue for some days or weeks, or he will not change his attitude of fear of reading to one of a desire to attack reading. We must stay in that area of confidence until we are sure the child has developed security in the reading situation. With some children this takes much longer than others. We must gauge each individual case.

This part of the recipe tells us why with remedial cases we cannot usually read right up a series of standard readers with each book harder than the previous one. If the child finds success at one level, we must keep him on that level until he is secure in it. That is why we need sets of books all of the same reading difficulty,

so that a child can read two, three, five, ten books all at one level until he feels a real expert at that level before we put him up against a harder level. We do have such books now, one series of three at the second grade level, another of seven at the third grade level, another of over fifty at the fourth grade level, and so on. We need more such series, covering wide ranges of interests, and staying in the same "area of confidence" until we find the child ready to go beyond.

3. ADVANCE FROM THE AREA OF CONFIDENCE BY A CONTINUAL SERIES OF "SUCCESS STEPS"

When the child is ready to attack something new, he must succeed at once or his fear and insecurity will return. Therefore, the teacher carefully plans each step in the progression, adapting her every plan to the individual child. What is a possible step for one child may be an impossible step for another, because every step must be accompanied with immediate success. If it is a matter of learning words, one child may learn five new words with pride and confidence while another can learn only two. If it is a matter of a harder book, one child may tackle one considerably harder while for another child the book must be only slightly more difficult. Each step must be a "success step" and not a step into failure.

The teacher measures such steps by her past experience with many children and by her knowledge of the individual child. She also takes each step cautiously and tentatively. Sometimes she offers a new book and takes it away almost immediately when she sees she has expected too much. Or she may take over the reading herself so that it is a "success step" in hearing a new story if not in reading one. In fact, the whole progress of remedial reading is a continual watching of new steps and often of taking quick steps backward when the pace has been set too fast.

Here we have clearly pointed out the reason for the failure of so-called "organized remedial reading." This organization sometimes takes the form of a remedial workbook. But who knows that the pace of the workbook will be the pace of the particular child? The workbook may be a "success-step" for some children and a "failure-step" for some. Or if a class is attempted, the pace will be right for some, too slow for some, and too fast for still others. The same is true for any set course in sounding that must be followed on a schedule. Such a course provides success-steps for a few but failure-steps for others. In fact, any attempt to make a sort of "curriculum of remedial reading" is a direct invitation to failure, since it cannot provide success-steps day by day for all children. (Those who think in terms of "remedial classes" should learn of the better results by individual or very small group methods.)

The principles that require an initial "area of confidence" also apply here. The new step has to be incorporated into the child's area of confidence. He must be very sure of the new step before he attempts another. It is very hard for a remedial teacher to keep this in mind. When a child does so well one day, she is immediately tempted to begin something new the next day. But what about the child's confidence and ease in using this new step? Can they be secured in one day? The teacher may be through teaching the new thing, but the child is not through mastering it. He needs time. So each step means really enlarging the area of confidence, and confidence must be maintained.

This final step in the Recipe for Remedial Reading also explains why a remedial teacher needs such a great variety of materials and methods. Children differ

so greatly that what forms a series of success steps for one will mean nothing but descent into failure for others. No method works with all children. No materials work equally well with all children. Certain methods and materials have a better "batting average," so to speak, than other materials and methods, but the remedial teacher needs a tremendous array of possible materials and methods if she is to arrange continual "success steps" for every kind of child she comes in contact with.

Finally, this third part of the Recipe explains why we cannot promise remedial results at any particular time. Parents and even school officials ask if we can restore a child to grade or secure a certain level of achievement by a certain date. We can say that for most children a certain progress is to be expected. But we cannot tell when this particular child will reach any particular level. We have to plan his success-steps as we go along. If we try to plan too far ahead, we find ourselves planning failures. How big steps can this child take? How long must he remain on one step before he can take another? No one knows this beforehand.

The Recipe for Success in Remedial Reading has therefore three requirements: (1) restore the child's security, (2) discover the child's "area of confidence," and (3) advance from the area of confidence by a series of "success steps." If this recipe is followed, success in the remedial work is assured. If this recipe is ignored, as it is in so many cases, there is no assurance of favorable results. So every plan for remedial work of any kind should be carefully checked against these three requirements of the Recipe, and so adjusted as to meet them. The three requirements cannot be ignored if we want happiness and progress for the children.

Comparison Between Best and Poorest Classroom Readers*

Delwyn G. Schubert

Teachers very often are prone to compare their best and worst readers in an effort to learn why they got that way. In an attempt to objectify comparison of the extremes, the author secured the cooperation of eighty experienced elementary teachers who were carrying professional courses in reading at Los Angeles State College of Applied Arts and Science during the spring semester of 1955. Each teacher was asked to complete two sets of paralleling questionnaires. One questionnaire dealt with "the poorest reader I have in class this year," and the other with "the best reader I have in class this year." The

* *Elementary English*, XXX (March, 1956), pp. 161-62.

table below shows how 80 best readers compared with 80 poorest readers on various items which probably have etiological significance. This table indicates that being a boy has decided disadvantages—at least where reading is concerned. This, of course, is in line with a number of investigations showing the prevalence of reading disability among males.

The percentage of grades skipped by the best readers is considerably smaller than the percentage of grades repeated by the poorest readers. This undoubtedly is a reflection of the ubiquitous policy of promoting poor readers regardless of their disability.

A COMPARISON OF BEST AND POOREST READERS IN INDIVIDUAL CLASSROOMS WITH RESPECT TO VARIOUS ITEMS

Questions	Best Readers (N = 80)		Poorest Readers (N = 80)	
	Yes	%	Yes	%
Is the child a male?	18	22.5	56	70
Has the child skipped a grade?	4	5	2	2.5
Has the child repeated a grade?	0	0	21	26.25
Has the child a speech defect?	0	0	18	22.5
Does the child speak another language?	5	6.25	12	15
Is another language spoken in the home?	6	7.5	13	16.25
Does the child seem physically immature?	1	1.25	24	30
Does the child seem emotionally immature?	4	5	40	50
Does the child come from a broken home?	18	22.5	23	28.75
Does the child like to read for pleasure?	78	97.5	12	15
Is the child a discipline problem?	6	7.5	33	41.25
Is the child left handed?	4	5	5	6.25

Although speech defects are more prevalent among the poorest readers and seem to prove significant when comparisons are made with the best readers, the presence of a foreign language doesn't prove too differentiating.

Marked differences in emotional and physical maturity favor the best readers. This corroborates an increasingly popular premise that organismic age is important in ascertaining reading potential.

More of the poorest readers came from broken homes than was true of the best readers, but the difference was relatively small. Discipline problems, on the other hand, occurred almost one-half of the time among the poorest readers and were almost absent among the best ones.

The importance of interest in contribut-

ing to reading efficiency is highlighted by the fact that almost all the best readers read for pleasure. Less than one sixth of the poorest readers were described by teachers as children who read for pleasure.

The old dominance bugaboo is given little support in this study. An almost equal number of sinistrads is found among the best and poorest readers.

It is probable that the best and poorest readers in elementary school classrooms have gained and maintain their status because of the operation of factors such as those treated in this study. It seems evident, too, that a multiplicity of factors is at work and is responsible for a child's being rated as the best or poorest reader by his classroom teacher.

37

Teaching Reading thru Social Studies*

James W. Curry

A wide range and a wealth of reading materials are generally necessary in social studies in order to acquire an adequate understanding of social problems. This reading for information requires a great deal of skill. Meaning comes from details when the central idea is understood.

GEOGRAPHY AFFECTS LIVING

In our sixth grade unit on "How the Geographic Factors Affect Living in the Different Parts of the United States" we decided to develop some firsthand experience before doing any extensive reading.

* *National Elementary Principal*, XXXV (September, 1955), p. 124-27.

Since the schoolroom windows face the Blue Ridge Mountains, the Potomac River, the Baltimore and Ohio Railroad, the old Chesapeake and Ohio Canal, a U. S. highway, and the two adjoining states of Virginia and West Virginia, abundant material was at hand for observation and discussion.

Because the unit was studied during the winter season, the class was able to observe snow and frost on the top of the Blue Ridge Mountains when there was none below on the playground. Thus, the pupils could see clearly that the atmosphere at the height of mountains is colder than the atmosphere in the low lands. Later the

same information was obtained from books.

A second outcome of our view of the mountain was a discussion of the uses of trees which led to the development of a wood use chart.

Observation of the Potomac River gave rise to study experiences about water in general, fish, and water transportation. *The Potomac* by Frederick A. Gutheim was obtained and read by some of the better readers.

The Chesapeake and Ohio Canal was used as an example of transportation that had been superseded by a better and faster means of transportation—the railroad. Railroads now have their competition in trucks and airplanes.

To obtain information about distant parts of our country, we invited parents to come to the classroom and talk about their travels across our country to California, to our Northern states, and to our Southern states. They described various communities, parks, caves, and mountains. Other parents, who were able to give a view of the more distant lands of Mexico, Alaska, Canada, and Cuba, also came. One parent discussed Eritrea, a former Italian colony in Northeast Africa, and showed pictures of that colony where she and her family had spent two years. The student from Eritrea sang a few songs in the native language.

By this time in our unit we decided to concentrate our studies on learning about the United States. Each child selected a state and wrote to the information agency of that state for material on its geography. Soon much current information was available.

DEVELOPMENT OF THE UNIT

This unit in social studies was based on the interests, needs, and abilities of the children. The unit provided a variety of reading levels and content. Slow readers were able to get much information from pictures of crops, vegetation, and of how

people live. As the unit progressed, the children obtained information from newspapers, magazines, books from the library and bookmobile, the literature of various state information agencies, and from their firsthand visits and observations.

Some instructional materials other than reading matter used to build word concepts were the globe, pictures, maps, charts, graphs, photographs, and records.

For firsthand experiences the pupils watched freight trains loaded with various products from 38 states on the way to the port of Baltimore. The pupils also watched trucks loaded with both manufactured goods and raw materials as they passed on a U. S. highway. And, finally, the children determined the state of origin of automobiles from their license plates.

READING SKILLS PRACTICED

After extensive discussion, our unit of study required much reading about how geography affects living. Conscious application of practice in certain reading skills was woven through the work. Among the skills practiced were:

1. Using context clues in independent reading with unfamiliar words
2. Developing a vocabulary pertaining to social studies
3. Getting the main idea of a paragraph
4. Using the parts of books to find information: index, table of contents, bibliography, glossary
5. Using the dictionary and glossary in learning the pronunciation and meanings of new words and to review familiar words
6. Using many types of reference materials: encyclopedia, almanac, magazines, dictionary, atlas
7. Using visual aids: globe, maps, pictures, graphs, and charts
8. Reading maps
9. Organizing the social studies materials for effective learning of the unit
10. Gathering information and selecting from it items which applied to specific issues

11. Acquiring skill in critical thinking and analyzing propaganda

ELEMENTS OF THE DIRECTED READING LESSON

The development of reading skills did not happen accidentally. It was part of the five basic steps of the directed reading lesson applied to reading on social science topics.

Step One. A background was built on the children's experiences or the experiences of one or two children who had crossed our country or had visited the location about which we expected to read or from which we had received literature. Several questions, brought out by the children and teacher, were written on the chalkboard.

Step Two. A short, guided silent reading period of only a few minutes to find the answers to the questions already on the chalkboard was provided. To obtain information about industries, population, climate, elevation, mountains, valleys, resources, and factories, we had to use many kinds of reading materials. While the children were reading silently, the teacher gave individual help with index, footnotes, dictionary, and other reference tools. Some children were given help in following directions. When frustration, tension, and lip moving were evident, the teacher tried to alleviate these conditions.

Step Three. The discussion following the silent reading was lively; all members

of the class participated in answering the motivating questions. It was necessary to summarize often, in order to emphasize the important points. A variety of questions were used: factual, argumentative, cause and effect, inferential, and interpretive.

Step Four. Silent and oral rereading were practiced for the purpose of proving a point, selecting the main idea, and emphasizing a point.

Step Five. The follow-up for enrichment and extension of concepts was enjoyed by all the pupils in the room. The children engaged in research, gave oral reports, gave written reports, and dramatized their findings. They enjoyed the arts of the dance and music—singing, playing, and listening—as well as of sketching. They took field trips, made maps, and looked at filmstrips. Finally, the pupils started a filing system of materials about our nation collected from the states, magazines, newspapers, advertisements, and photographs.

LIMITS TO OUTCOMES

Our experience indicates to us that the main values of reading in the social studies lie in improved comprehension of material read by pupils and in making information about the United States their own. Thus, reading in the social studies probably should not constitute the entire reading program but it should strengthen the regular reading program.

Science Teaches Reading*

Ellen J. Sprague

It is a universally accepted fact that reading is a vital part of the teaching of every subject, whether social science, mathematics or science. But reading in these areas can be more than just a means to an end; it can be inspiring and fruitful as well. The Annual Science Exhibit at the Chambliss Children's House offers so many wonderful reading opportunities that it leaps to mind during the discussion of a subject such as this. This article is an effort to share with readers some of the profitable reading experiences of the primary pupils in connection with the Annual Science Exhibit.

The general theme of our exhibit was "Resources." Since the first-grade children were embarked upon a unit on the farm, they decided that their contribution to the exhibit would be centered around farm animals. Reading activities in which the children engaged during the preparation for the exhibit included organizing and labeling materials, oral and written reports, making booklets, composing stories, letters and poems, and making a frieze for the exhibit.

However, the most engaging and purposeful reading experiences came when the children were carrying out experiments in class. Inspired by the scientific activities going on around them in higher grades, the first graders wanted to perform experiments, too. "What experiments could we

perform, understandable at first-grade level, in connection with our theme 'Farm Animals Are Valuable Resources'?" We did some research in elementary science books and discovered a few. These experiments included "Elastic Bones," which consists of soaking chicken bones in vinegar to make them pliable; "Invisible Writing," which involves writing with milk and holding the writing over heat; the "Plastic Egg," which concerns getting an egg, unbroken, to the bottom of a milk bottle; making casein from cow's milk.

Making casein was the first experiment which the children undertook. In looking through one of the library science books, they were attracted by a colorful picture which showed a cow surrounded by buttons, a hat, an umbrella, a can of paint, a skirt, and other articles. The caption under the picture read: "We get these things from cow's milk." All pupils could read this sentence quite easily, and it gave rise to several queries: "How can you make things like hats and buttons out of milk?" "How can milk get hard like an umbrella handle?" The teacher explained that first the milk had to be made into a substance called casein. Several voices inquired, "May we make some casein?" The cry was taken up by many others. Some expressed the thought that it would be a good experiment to demonstrate at the Science Exhibit. The teacher agreed, but added this qualifying statement: "You must be able to read the directions well in order that

* *The Grade Teacher*, LXXII (April, 1956), 16, 122.

your experiment may be a success." To that end she made two charts.

The first one read:

HOW TO MAKE CASEIN

The Things Needed

1 cup skim milk
agateware pan
a tablespoon
thermometer
 $\frac{1}{4}$ cup vinegar
a measuring cup
a bowl

The second one read:

What to Do

Pour the milk into the pan.
Place the pan on a stove.
Put a thermometer into the milk.
Heat the milk slowly to a temperature of 90 degrees F.
Take the milk off the stove.
Add the vinegar.
Stir the mixture well.
Soon you will see a rubbery mass.
Pour cool water over it.
This is casein.

The teacher showed the pupils the first chart and asked, "What does this chart tell us?" After getting the desired answer, she asked each child to read the chart silently and to raise his hand when he was ready to read one or more of the "things needed."

The only word which caused trouble was "agateware," which was shortly recognized by a pupil who saw the word "gate" in it. A little girl said that she could read "thermometer" because it had two "er" sounds and the word "mom" in it. " $\frac{1}{4}$ " led to an intriguing lesson in arithmetic. The word "skim" brought up an interesting discussion on what skim milk is. (Some thought that "skim" was another term for buttermilk.)

Before Chart 2 was presented, the children were asked to name some of the ways by which they could find out what un-

known words say. The children named such helps as:

Finding a little word in a big word

Sounding out letters and letter combinations

Looking for "family" endings

Getting the word through the meaning of the sentence

Dividing the word into parts

The pupils were allowed to read the chart over silently, noting difficult words. These words were placed on the chalkboard and attacked by one or more of the methods already mentioned. Various pupils were called upon to read the sentences, the teacher making sure that each child who had listed a "difficult" word read a sentence containing that word. The next day the children were given a flashcard drill based on the words and sentences studied the previous day. The chart was then reread. This time all the children could read the chart well. The term "90 degrees F." had already been explained by our "most scientific" boy.

Now that the children were all familiar with the steps in making casein, they were impatient to put their knowledge into practice. A hot plate was already available in the room. Various pupils volunteered to bring other needed articles.

Everyone was present and eagerly awaiting the last bell on that following red-letter day. The class was divided into three groups so that each child could participate in some way. Each group had a chance to gather around the table and make its portion of casein.

The teacher wrote on the board tasks to be done, such as:

Measure the milk.

Pour the milk into the pan.

Place the pan on the stove and put the thermometer into it.

This provided another reading lesson for the class, for each child had to read his task before he could write his name opposite it. If he encountered any difficulty, he

was helped. Then the tasks were all read aloud by the group.

It is impossible to describe the wonder and delight which the children showed as they gazed upon the fruits of their labor. They had really made the "rubbery" substance described in the book! Delighted grins broke out as each child felt it.

After the experiment was over, two of the more able readers gave the pupils the benefit of their research. They told the class how casein is made into a powder and mixed with other materials in order to make clothing, paints, and other articles.

A group of children decided to make a "Casein Chart." A sample of the casein made in class was placed on the chart, together with buttons, glue, paint, and an umbrella handle made from a casein base.

They wrote labels and pasted them under the articles. (This provided a writing and a spelling lesson.) The class was very proud of this chart and of the other exhibits based on this experiment. Even the slowest child enjoyed showing and explaining them to visitors at the Science Exhibit.

In a somewhat similar manner the other experiments were made interesting reading experiences. It was noted that most of the slow readers became more enthusiastic and made gains in reading skills. Because of our small, scientific efforts, a whole new field of reading was discovered and all books of scientific nature were eagerly explored. These, and many other significant signs of pupils' progress in reading, clearly indicate that science offers many valuable opportunities for teaching reading.

39

Caste System or Democracy in Teaching Reading*

Alvina Treut Burrows

No democratic-minded person in our society defends the caste system. Yet in our schools we are still operating such a system. In thousands of classrooms across the country children of poor reading performance live under a stigma quite akin to that of being an Untouchable. Even when a poor group is labelled the "Brownies" or the "Chipmunks," no one is fooled. Nor do the average or good readers fare much better. For though the *own* is less if one belongs to a middle or superior group the

satisfactions are often as limited. Prescribed reading, excessive directions, reading to answer someone else's questions about material one doesn't care about in the first place can scarcely be a challenging experience to children of any level of reading power. Nor does the questionable satisfaction of belonging to a "better" group build the democratic attitudes we profess to esteem. The snobbery engendered in children and very often in their parents is, indeed, sad. And all too often the academic little snob who rate the exalted position of being in the "best" group

* *Fleming's English*, XXVII (March, 1959), 145-46.

are those children who most need other emphases and other kinds of satisfaction. High caste or low, in reading this anti-social situation is also anti-satisfying for both children and teacher.

THE REGIMENTED PROGRAM

In learning to read, as in any other living activity, the nucleus of a dynamic group is that of common purpose or common interest. And it has been demonstrated enough times that similar scores on reading tests do not automatically spell out such common purposes or common interests. One has only to note in such a regimen the amount of teacher effort devoted to holding children's attention, to trying to force children to keep the place, or to disciplining the group while one child recites, to know that something is seriously wrong. What is wrong, or at least *one* thing that is wrong with such an organization, is that the groups are not groups in any real sense. Their individual interests in general and consequently their interests in reading are just as diverse as though their test scores were miles apart. Another thing that is wrong with this three level plan is that the nature of the reading process itself is violated. No matter how social the ends or aims of any reading experience may be it is still an individual process. Individual tempo, individual rhythms of work, and individual thinking are still in action. To try to make a group of children "keep together" in reading a selection is a frustrating experience. When this is done day after day it is not surprising that many children hate reading.

MEETING INDIVIDUAL NEEDS

Better ways of meeting children's needs in reading are being used in our forward moving schools. Many teachers have already arrived at a thorough-going individual program in reading with only those group activities in reading which are of necessity social activities. Dramatizing a

beloved story needs group planning. Meeting with others who have read an informational article and who need to clarify their findings for a group exhibit or report is a normal, social use of reading. Practicing the serial reading of some gripping story may be another. There are, of course, many more. These group experiences which can not be achieved by individuals working alone beget a very different sort of group amalgamation than the test-determined grouping which is likely to beget only resentment.

The transition from patterns of work long accepted by parents or administrators to a more individually focused regimen must of course be a gradual one. Months or even a year may be necessary to substitute new habits and new attitudes for old ones. And in the transition at least two important considerations must obtain. A number of books, texts, and magazines must be made accessible to provide for the variety of content interests and the range of reading ability to be found in any group of children past the first threshold of reading. Secondly, the teacher must respect children's choices of reading material for a large part of their reading experience if she hopes that they will respect her choices, her suggestions or assignments. In making the change from the strictly directed reading assigned to one of the so-called ability groups, a teacher may use several techniques of transition. Perhaps one period a week may be set aside for those who want to read a book of their own choice while others do some fairly quiet job or assigned reading. Sometimes a beginning is made by excusing from "group" reading a few children who are reading books they are eager to finish. More and more exceptions can be made until a considerable nucleus of interested readers can carry on with a minimum of teacher direction. Enthusiastic chatting about stories by those who are enjoying books or swapping accounts of exciting adventures intrigues others to try reading for themselves. Self direction can

thus be fostered in reading while one or two days a week are still used for the old three-group plan one hopes soon to lay aside. Children and teacher grow into something better while outgrowing an undemocratic and unproductive regimen.

MAKING THE TRANSITION

One teacher, eager to move over into individual reading, made a successful transition through setting up six groups in her fifth grade class of twenty-two. With so many groups of twos, threes, or fours in the room, clear-cut ability lines were easily lost. Each group selected its own story for the day and decided what portions were to be read aloud by each and who was to report to the class and how. The teacher spent some time with each group helping with word analysis where needed, and participating in group discussion. One group needed much help, others considerably less. At the end of forty-five minutes each group had one member report to the class. One day a week members of a group reported on some reading they had done which was related to one of the major content studies the class was engaged in. A daily period was also devoted to word study. Some of the words offering difficulty in the reading period were analysed as to structure and extended or clarified as to meaning. Dictionary and usage exercises were tied in with this analysis. One completely free period of silent reading was planned for Friday afternoons, a likely time for individual selection for weekend reading. A classroom library became an important center of the reading program.

The delight the children found in these varied reading activities was as great as was their progress. Nor is this parallel a paradox! Mrs. Griffin's reports upon the personal growth of her charges are as important as the reports of test-measured reading growth. Only a few of her anecdotal recordings can be sampled here:

Chuck, who (had) great difficulty pronouncing words came upon the word "boulevard."

He looked expectantly at the teacher—then sounded the word out, and pronounced it correctly. A member of his reading group said, "You see, Chuck, you can do it if you try." Chuck's shrug was accompanied by a real smile—. Since that time, he has no longer hesitated but plunged bravely into his reading and much of his bossiness and show-off attitude within the group has disappeared—.

Of another child Mrs. Griffin reports thus:

Gary, whose reading level has been at the middle of the third grade, read orally to the class the entire first page of the fifth grade *Weekly Reader* without a single error or hesitation. Every member of the class seemed to be holding his breath for Gary's triumph. The class was as thrilled as he was. "You said I could do it, and I did," said Gary,—who had come to this class only a few weeks ago. Since comprehension and oral interpretation of the printed words have improved, Gary's baby ways to gain attention have ceased and the class has welcomed him as a real friend.

Of still another Mrs. Griffin recorded,

Albert (had) excellent grades in science and arithmetic but very poor grades in social studies and reading. The test revealed that he was reading only at the fourth grade level. He "hated" reading; avoided taking a book from the library whenever possible. Recently his group was reading *The Five Hundred Hats of Bartholomew Cubbins*. The reading period was over before the group finished the story. At the close of school Albert remained a half hour—to complete the story of his own volition. As he left he said, "Boy, that was a good story." His latest test indicated that he made more than a year's progress in the six weeks period.

It is regrettable that records of all twenty-two children's personal satisfaction can not be detailed here. The quest for baseball yarns to satisfy William netted deep absorption not only for him but for half the class as well. And in April one lad wanted to read *The Night Before Christmas* because he said he'd heard about it! This youngster, a "poor" reader from an

Reading as a Source of the Ideal Self*

Samuel Weingarten

Young people's need for idealized persons with whom to identify has long been recognized by students of human development. From childhood through adolescence, and even into adulthood, the individual takes his parents, teachers, youth-group leaders, age-mates, and adults as exemplars. The question for the ideal self is often difficult during the adolescent years when parental examples are no longer accepted uncritically and when important decisions determining the individual's social adjustment must be made. The ego-ideal becomes a composite of all the identifications which the young person makes. From all the persons with whom he identifies he may acquire personal traits, attitudes, and behavior patterns. One of the ways by which his character is shaped too is thorough imitation, usually unconscious, which accompanies identification.

READING HELPS IN FORMULATION OF IDEALS

In addition to people who serve as models, representations of people in comic strips and comic books, motion pictures, radio and television performances, and especially in books serve as objects for identification and imitation. The role of reading in giving youth ideals for personality development and behavior has been pointed out by many writers on the relationship of reading to the needs of young people. Those

writers who consider reading as an aid in personal-social development through the help which it gives in the establishment of goals imply the value of reading in the formation of the ideal self.

Roxanna Anderson pointed out in 1912 that most of the earlier studies showed that young people's ideals are largely formed from reading. In her study of the reading tastes of high school pupils she asked adolescents to "Name two or three characters that you have read about, in history, in literature, or elsewhere, which you would wish to be like." The boys led in the choice of historic or public characters: eighty-five per cent indicated such characters as contrasted with only thirty-five per cent of the girls. The girls led in the selection of characters from fiction: sixty-four per cent indicated such characters, as contrasted with fifteen per cent of the boys. In 1930 David Spence Hill reported the results of an investigation of the ideals of 8,813 young people ranging in age from six to twenty years. He employed this question to obtain his data: "Of all the persons whom you have heard, or read about, or seen, whom would you care to be like or to resemble? Why?" He found that the largest number of ideals for the group were selected from historic Americans, historic foreigners, and contemporary persons widely known to the public. Relatively few of the ideals were selected from characters in religion or fiction. For sources of the ideal self for the seventeen-through-twenty-year age group

* *The Reading Teacher*, VIII (February, 1955), 159-64.

the investigation showed them to come from historic and public characters (boys, 77.2 per cent; girls, 42.3 per cent; both, 61.3 per cent); from characters (girls, 2.9 per cent; both, 2.8 per cent); from fiction (boys, 2.8 per cent); from characters in religion (boys, 2.1 per cent; girls, 2.8 per cent; both, 2.4 per cent). Havighurst, Robinson, and Dorr reported in 1946 an investigation that was undertaken to determine the stages in the development of an individual's concept of the ideal self, from childhood through adolescence. The subjects of the study, 1,147 boys and girls, ages ten through seventeen years, were asked to "Describe in a page or less the person you would like most to be. This may be a real person, or an imaginary person. He or she may be a combination of several people." The replies indicated less than 10 per cent of the ideal selves to be in the category of heroes or great people of history or literature. In a study by Havighurst in which a group of sixteen-year-olds was asked to write on the topic "The Person I Would Like to Be Like," none of the replies included a "Hero Read About" as the ideal self.

RESULTS OF RESEARCH STUDY ARE LISTED

In 1952 the present writer submitted a questionnaire study to 1,256 college students (705 males; 551 females), whose ages ranged from sixteen to thirty years, to ascertain the ways in which their voluntary reading had contributed toward the solution of their problems of personal and social development. Among the items in the questionnaire to which the student was asked to reply was: "Have you ever read of a character in a story or play who seemed to be your ideal? Give the title of the book and the name of the character. Write a characterization of this person, giving his or her chief traits." Four hundred and ten students, 32.6 per cent of the total number answering, indicated that they had found in their reading a charac-

ter who represented to them an image of the ideal self: of these 233 were males, 31.6 per cent of the total number of males; 187 were females, 33.9 per cent of the total number of females. Three hundred and forty-three of these students gave amplified affirmative answers, of which 322 (181 males; 141 females) were sufficiently specific to be of use for analysis in this study.

One hundred and ninety-six (102 males; 94 females), or 60.8 per cent of these identifications, were with fictional characters. One hundred and twenty-six (79 males; 47 females), or 39.1 per cent, were with characters from life represented in writings—historic and religious characters, characters prominent in contemporary public life, and less known characters in real life. In this second group, the largest number of identifications were historic characters, 35.7 per cent, and with contemporary public figures, 28.5 per cent. The amplified replies made it possible to determine the traits of the persons who represented these young people's ideal selves.

TYPES OF IDEAL SELVES ARE CLASSIFIED

From these replies it was possible to classify according to types the ideal selves originating in persons in life about whom these students had read. The best known, and probably the most psychologically valid, types of men are the six suggested by Eduard Spranger: (1) the Theoretical—whose dominant interest is the discovery of truth; (2) the Economic—who is characteristically interested in what is useful; (3) the Esthetic—who sees his highest value in form and harmony; (4) the Social—whose highest value is love of people, one or many, conjugal, filial, friendly, or philanthropic; (5) the Political—who is interested primarily in power; (6) the Religious—whose highest value may be called unity, the quest to comprehend the cosmos as a whole, to relate himself to its embracing totality. To these types may be added another, the more mundane type whose

values are pleasure seeking and vital. The classifications of the ideal selves of the 126 students (79 males; 47 females) who found their ego-ideal in persons in life, are given in the following analysis:

<i>Types of Men</i>	<i>Males</i>	<i>Females</i>	<i>Both</i>
Theoretical	15	3	18
Economic	3	1	4
Esthetic	6	3	9
Social	29	24	53
Political	9	6	15
Religious	4	4	8
Mundane	13	6	19
Totals	79	47	126

Among the Theoreticians with whom students identified were: Einstein, Burbank, Fritz Haber, J. Robert Oppenheimer, Galileo, Socrates, Thoreau, Gregory VII, Pasteur, Marie Curie. The Economic men who represented the ideal for some students were: Henry Ford, Carleton Putnam, and Benjamin Franklin. Creative artists represented to other students the type of person they would like to become: Horowitz, Edward Oliver, Beethoven, Frank Lloyd Wright, Cellini, Chopin, Pavlova, and Oliver. The devotion of these persons to the welfare of others was considered by the largest number of students as a quality worthy of emulation: Jesus Christ, Saint Paul, Father Damien, A. E. Hertzler, Frank Leavell, Darrow, Rockne, Ernie Pyle, Will Rogers, Debs, Franklin D. Roosevelt, Lincoln, Gideon Jackson, Paul Revere, Robin Hood, Saint Peter, Ruth, Saint Theresa, Mary Baker Eddy, Tom Paine, Joan of Arc, Dolly Madison, Mrs. Jefferson Davis, Marie Curie, Florence Nightingale, Katharine Cornell, Lou Gehrig, Mary White, Mrs. John Gunther, Kitty Beaurepous. Leaders in many fields who have achieved personal power, influence and renown seemed to some students worthy of being exemplars: Joe DiMaggio, Monty Stratton, Lou Gehrig, Johnny Revolta, Booker T. Washington, Frank Bettger, Queen Elizabeth I. To others the persons whose values were largely spiritual represented the ideal self: Saint Bernadette,

George W. Truett, Thomas Merton, Charles H. Spurgeon, Saint Augustine. Their zest for life attracted a large number of students to these men and women: Richard Halliburton, Anthony Wayne, Theodore Roosevelt, "Wild Bill" Hickok, Bill Mauldin, Coach Dan Walker, Father Marquette, Stewart D. Engstrand, George L. Mallory, Louise Baker, Jesse Fremont, John Barrymore, Helen Keller. The books in which the students became acquainted with these persons were largely biographies and autobiographies; in a few instances these works were in fictional form.

GOOD READING MATERIALS HELP TO DEVELOP GOOD CHARACTERS

Reading materials can help young people to master the developmental tasks characteristic of their growth level. Through identification with characters and situations in books which they read, they often find clues for their own adjustment and the solution of their problems. Of the 196 students who indicated fictional characters as ideal selves, 138 characterized these persons in such a way that they can be classified in relation to the problems in personality development and social adjustment with which adolescents and young adults are confronted. The ideal selves seen in fictional characters can be grouped in the following categories of people: (1) those who have attained independence, have the courage of their convictions, and are individualistic and self reliant (e.g., Howard Roark in Rand, *The Fountainhead*); (2) those who are fearless and brave (e.g., Sydney Carton in Dickens, *Tale of Two Cities*); (3) those who know how to get along with others (e.g., Antonia in Cather, *My Antonia*); (4) those who understand people (e.g., Gill Carter in Clark, *The Ox-Bow Incident*); (5) those who are liked by other people (e.g., Vivian in Shaw, *Mrs. Warren's Profession*); (6) those who have qualities of leadership (e.g., Hugh Conway in Hilton, *Lost Horizon*); (7) those

who are altruistic (e.g., Jo in Alcott, *Little Women*); (8) those who are dedicated to their work, are conscientious in performing their duties, and are successful in their vocations (e.g., Steve in Robinson, *The Cardinal*); (9) those who work with determination toward a goal (e.g., Miss Bishop in Aldrich, *Miss Bishop*); (10) those who struggle with success against obstacles (e.g., Spike Russell in Tunis, *Rookie of the Year*); (11) those who search for truth (Larry in Maugham, *The Razor's Edge*); (12) those who are idealists in conflict with materialism (e.g., Robert Jordan in Hemingway, *For Whom the Bell Tolls*); (13) those who put their religious ideals into action (e.g., Faye in Ingles, *Silver Trumpet*); (14) those who may be said to be rational (e.g., Martin Arrowsmith in Lewis, *Arrowsmith*); (15) those who search for knowledge (e.g., Madame Wu in Buck, *Pavilion of Women*); (16) those who have attained a good set of values (e.g., Kristin in Undset, *Kristin Lavransdatter*); (17) those who have had adventurous experiences (e.g., Jason Starbuck in Marshall, *Yankee Pasha*); (18) those who are able to bear the adversities of life and to accept them realistically (e.g., Jane Eyre in Bronte, *Jane Eyre*); (19) those who are resourceful (e.g., Sammy in Schulberg, *What Makes Sammy Run?*); (20) those who are well-integrated (e.g., Sue in Boylston, *Sue Barton, Superintendent of Nurses*); (21) those who have social poise (e.g., Ashley Wilkes in Mitchell, *Gone With the Wind*); (22) those who have lived cleanly (e.g., Roy Tucker in Tunis, *The Kid from Tomkinsville*).

IMITATION IS USUALLY UNCONSCIOUS

Imitation of an idealized person, someone in life or a character in a book, is usually unconscious; this probably explains the small number of students who were able to specify the exact ways in which they were affected by the ideal self in the acquisition of personality traits and in their

behavior. Almost thirty per cent indicated that they had tried to develop personal qualities like those of characters in books and 12.4 per cent indicated the ideal selves as these characters. Almost twenty-one per cent indicated that they had tried to imitate the behavior of characters in books: 7.3 per cent indicated these characters to be the ideal selves.

In the amplified answers, 79 males indicated that in reading they had found a person from life who became their ideal and whom they considered worthy of emulation: 16, or 20.2 per cent of them, indicated that they had tried to imitate the personal qualities of such characters, and only 6, or 7.6 per cent, indicated an effect on behavior. Of the 47 females making such identifications, 18, or 38 per cent, indicated an effect on personal qualities; 11, or 23 per cent, indicated an effect on behavior. Twenty-seven per cent of both males and females who idealized characters from life indicated that they had tried to acquire the personal characteristics of these persons; 13.4 per cent indicated that they had tried to model their behavior in accord with that of the idealized persons.

Of the 102 males who found their ideal in a fictional character, 18, or 17.6 per cent, tried to imitate the personal traits of these characters and only 4, or 3.9 per cent, their behavior. Of the 94 females thus identifying, 22, or 23.4 per cent, tried to become like the ideal characters and 8, or 8.5 per cent, tried to imitate their behavior. Of both the males and females, 20.4 per cent were affected to the extent of trying to acquire the ideal's personal traits, and 6 per cent to imitate their behavior. An examination of the replies related to the imitation of traits and behavior leads to the conclusion that the students did not make a careful distinction in meaning between the personal characteristics and the behavior of the idealized persons. This, together with the factor of unconsciousness in imitation, is probably the explanation for the small percentage of students who

indicated that they had tried to imitate the behavior of idealized persons.

TRAITS ARE LISTED

The descriptive statements about the idealized persons revealed the traits which were imitated, consciously or unconsciously. Most frequently mentioned were maturity, wisdom, strength of character, courageousness in maintaining one's point of view, independence and self-reliance. The possibilities for socialization through the imitation of traits can be seen in the frequent mention of traits which are characteristic of the person who is concerned with the welfare of others, the altruistic person. High also in the frequency of mention were the traits of the person who succeeds: ambitions, industry, perseverance, and confidence. The person who is intelligent, rational, or intellectual was admired by an equally large number of students.

One hundred and three students indicated in the amplified answers that they had consciously tried to imitate the personality traits and the behavior of the idealized characters encountered in reading. *Most frequently mentioned were traits related to the individual's concern with the welfare of other people. Almost as*

frequently the traits of maturity, wisdom, strength of character, courageousness in maintaining one's point of view, independence, and self-reliance were mentioned. High in frequency of mention also were traits related to the person who succeeds and the traits of intellect, rationality, and intelligence. These groups of traits parallel closely in order of preference those traits noted in the preceding paragraph as the ones admired.

DEVELOPMENT VALUE OF WIDE READING

The significance of these findings is that they show the effects that reading can have on the development of the individual. They disclose the way in which youth derive developmental value from reading by recognizing ideal characters and by emulating their traits and behavior. A developmental reading program should make available to young people in classroom and library a variety of reading materials containing characters whose worthy qualities and actions may become goals for emulation. Through identification youth can attain *new stature by attempting to reach personal qualities and behavior patterns that are marks of wholesome growth.*

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Fact and Fiction About Reading Improvement*

Doris Wilcox Gilbert

Recently twenty-five top executives of a large industrial company in the East be-

* *Power and Speed in Reading* (copyright 1954, 1956, by Prentice-Hall, Inc., Englewood Cliffs, N.J.), pp. 106-10. Reprinted by permission of the publisher.

came interested in discovering what improvement in reading they could achieve through training. Because of the exacting nature of their work, they wished to sharpen their grasp of details and, if pos-

sible, to increase their reading rates. A reading specialist from a neighboring university made a careful study of their abilities and planned out a training program which made use of the technical materials with which they were required to work. After twenty hours of directed practice the tests showed average gains of 15 per cent in accuracy of comprehension and of 151 words per minute in rate.

This experiment is illustrative of the nationwide interest in the improvement of adult reading and of the results that are being accomplished. The development of this interest had its beginning a decade or so ago during the war. Preparation of an army today is in a measure dependent upon the ability of the men to read, and thousands of draftees were lost to the Services because they were illiterate. When the point was emphasized by President Roosevelt in a speech to the nation, the journalists took it up and challenged the effectiveness of school instruction.

According to the 1940 census, the average amount of school instruction was between 7 and 8 years, and according to an investigation based on tests given to samplings of adults, the scores in reading likewise averaged between 7th and 8th grade levels. Yet a minimum level of 9th grade appears to be necessary in the United States for social and personal competence and meeting national demands. During the war particularly, the importance of reading became more than ever apparent since it was necessary for people to read in order to fill out forms, follow the war news, and cooperate in wartime efforts.

HISTORY OF ADULT READING PROGRAMS

Even before the war, a number of colleges and universities—Harvard, Dartmouth, Columbia, Minnesota and others—had instituted reading courses or clinics, but these were usually reserved for freshmen or for upper classmen whose academic difficulties appeared to stem from poor

reading. Very few non-students were accepted. However, when the Adult Reading Clinic at the University of Chicago began operation in 1941, it was opened to students and non-students alike. In the six years of its existence, Dr. Guy Buswell worked with 1500 adults and demonstrated that it is possible to secure a material increase in rate without sacrificing comprehension.

One by one, the various branches of the Armed Forces introduced reading instruction for enlisted men who could not read well enough to perform their duties satisfactorily. The instructors produced a variety of materials which dealt with subjects of interest to the men, but simple enough for instructional purposes.

Following the war, with the phenomenal increase in enrollment in the colleges, the problem of reading became acute. Many students who formerly would have gone no farther than high school now flocked to institutions of higher learning, and since the classes were too large for individual attention, the only practical alternative was the establishment of reading improvement programs. Today, most of the major colleges and universities maintain reading classes or clinics or both.

REMEDIAL READING VERSUS DEVELOPMENTAL READING

The changing nature of our civilization makes imperative higher and higher levels of literacy. The recognition of the importance of reading occurred first in the elementary school where it was considered a fundamental part of the curriculum. Slowly the idea of improving the quality of reading climbed the academic ladder to the high school and then to the college. Finally, it has reached the adult level.

But the first adult instruction was largely remedial in character; it was intended for those with serious reading handicaps. Today's instruction is more often developmental than remedial; it is designed for the average readers and the good readers who

feel the importance of becoming superior readers. It is based upon the thesis that few read to capacity, no matter how good they are. There is mounting evidence to show that good readers gain more through training than do poor readers.

In the Armed Forces, a number of reading improvement programs have been introduced for the officers—many of them good readers at the start—to facilitate the work of covering the vast quantities of communications passing over their desks. College classes, too, have reflected the trend. Where the enrollment is voluntary, classes today are often made up mainly of upper division and graduate students who wish to sharpen and refine their reading to meet the increasing demands in their various fields of specialization.

The dollars and cents value of good reading has appealed to business people. They look at it this way: If a man with an annual salary of \$20,000 spends two hours per day on business reading, the cost amounts to about \$5,000 a year. If he can be trained to do the same reading equally well in half the time, the cost is reduced by one-half, and he saves \$2,500.

Like the industrial company in the East which was mentioned earlier, banks, department stores, manufacturing concerns, oil refineries, chemical companies, and other commercial establishments over the country are introducing improvement courses for the reading personnel—particularly for their executives. There is a constantly increasing flow of mature adults in different reading situations who are interested in self-improvement.

FICTION NUMBER ONE

With the mounting interest in better reading, there have grown up certain misconceptions. One of these concerns speed. There is a widespread belief that reading courses regularly train people to read at 1500 words per minute or better, and that some people can read a full length book in an hour. Despite frequent refutations in

the literature on reading, the myth still circulates that some people read a paragraph or even a page at a glance.

In one carefully executed investigation of 62 adults ranging in age from seventeen to fifty years, the initial rates per minute ranged from 111 words to 333 words. At the end of twenty hour-long periods of corrective exercises the average rates ranged from 311 words to 469 words. In an experiment with business executives, 18 hours of directed practice resulted in increases in the average rate from 198 words to 358 words per minute. In an experiment with Air Force officers the average rate per minute increased from about 240 to about 600 words.

Since academic work probably leans more heavily on reading than any other profession, it may be assumed that college professors are among the most competent readers anywhere. Yet a study of professors at the University of Michigan showed that few could read faster than 500 words per minute, even in their own fields of specialization.

Over a course of years, every reading specialist finds occasional people who reach or exceed 1000 words per minute with adequate comprehension, but these people are the rare exception rather than the rule. A rate of 500-600 words per minute is good, and rates above that are excellent, provided, of course, the material is understood.

The idea that people commonly learn to read at 1500 or 2000 words per minute probably traces back to the fact that with timed-exposure techniques they can be trained to recognize digits or words at a rate of 1/100 second. But this does not mean that 100 such units could be grasped in the same second. Reading is a sequential, connected process, with each unit of thought fusing in turn with the others to constitute the substance of the whole, and the movements of the eyes and the integration of the material in comprehension cannot be left out of the time calculations.

It is impossible to read a page or even a

paragraph at a glance. The eye movement camera has shown that the eye moves along each line of print in a series of moves and pauses, with clear vision taking place only when the eye is at rest. The person who has never really learned to read and who reads little more than the daily paper, may pause 20 times or more to the line. Experts have been known to pause only 3 or 4 times, when the material was simple and the line short. Usually, good adult readers pause 5, 6 or 7 times to the line. The mature reader surpasses the poor reader in several ways; he pauses more briefly and less frequently and he regresses less often.

A typical record for a poor reader is shown below. The vertical lines give the positions of the pauses and the numbers above them indicate the order in which they occur.

2 1 3 4 5 6 7 8 9 10 11 13

Nobody reads a page or even a paragraph at a glance.

An eye movement record for a good reader might look like this.

1 2 3 4 5

Nobody reads a page or even a paragraph at a glance.

Since no one reads an ordinary line of print with less than 3 or 4 fixations, the page-at-a-glance myth has no defense. People who are credited with such feats are actually engaging in a highly proficient type of scanning or skimming. Unquestionably, masterful skimming is an extremely valuable skill, but it is not to be confused with reading.

FICTION NUMBER TWO

A second misconception is related to the use of the term "speed reading." With the growth in interest in adult reading, certain investigators were curious about a particular question; they wanted to know whether it was possible to increase speed

without loss of comprehension. In order to find the answer, they selected individuals with adequate comprehension, trained them with speed techniques and measured the results. They found that speed can be increased without loss of comprehension; they also found that speed training alone does not improve comprehension.

It is important to note that, in these experiments, the scientists were not concerned with building total effectiveness in reading, nor with the diversified problems of adult readers. They were interested in just one question, and they carefully selected for their experiments only those people with adequate initial comprehension.

But the time factor is important in current living, and the term "speed reading" caught the popular fancy and became as familiar as some of the advertising slogans. It has been applied indiscriminately to reading improvement courses of all types.

The development of maximum speed is a major objective of reading instruction. But it is not the only objective. Speed does not function in isolation, and not all adult readers qualify as equal in comprehension.

A few examples from the writer's classes illustrate the diversity of adult reading problems.

A graduate student majoring in city administration had to devote excessive amounts of time to study and attributed his slowness to poor reading. Standardized tests confirmed his diagnosis, and showed that a major cause of difficulty was a weak vocabulary. He had never had any need for an extended knowledge of words during his childhood. He had grown up on a ranch where each member of the family had heavy responsibilities and long hours of physical labor. After work, there was little interest in reading or conversation.

A woman who found constant pleasure in novel reading developed a speed of 750 words per minute and a good grasp of details which were necessary to the plot of the story. After her husband's death it was

necessary to seek employment, and, since she had a little knowledge of chemistry, she accepted a position as reader with a chemical firm. It was her work to read trade and professional journals and make abstracts of the articles. She found herself unable to cope with the job because she had never learned to read meticulously for the kinds of details which are important in science.

A physician who had been an excellent reader during his undergraduate days formed the habit of regressing in his professional reading to make sure of each fine point. When he was tired he vocalized to keep his attention on his task. In time these habits transferred to all his reading and slowed down his rate. He was interested in literature, politics, and biography, but was finally forced to forego all but his medical reading.

An undergraduate was dropped from his university because of poor grades. He was interested in sports, college activities and social affairs. On standardized reading tests, he ranked at the 85th percentile for his academic level, yet he avoided reading. He stated that when he sat down to study his mind wandered to more interesting subjects. He felt that he comprehended while he was reading, but he didn't remember the material and couldn't organize the facts he read to answer examination questions.

These four examples illustrate the futility of limiting reading improvement programs to "speed reading" alone. Speed training could not have improved the word knowledge of the graduate student in city administration. It could (and did) help

the physician. It was not the basic requirement of the woman whose rate was extremely good at the start, nor of the college student who needed to improve his concentration, his study techniques, and his retention.

THE IMPORTANCE OF PERCEPTUAL TRAINING

This is not to deny the importance of perceptual habits in reading. The individual with a narrow span, a slow rate of recognition, or a tendency to regress too often will remain a limited reader until these habits are corrected. Furthermore, few people read to capacity, and the development of speed depends in substantial part upon the sharpening of the perceptual habits.

Speed training is an integral part of any reading improvement program.

THE IMPORTANCE OF COMPREHENSION AND OTHER FACTORS

But the total reading process is built upon many skills and abilities—not just one—and no method can be fully effective which fails to take them into account. The 1953 progress report of the Reading Laboratory at the Air Command and Staff School at Maxwell Air Force Base lists several directions of change in its program and underlines the shift toward greater emphasis on comprehension and adaptability. It is becoming increasingly clear that drill which stresses understanding results in better gains for both rate and understanding than drill which stresses speed alone.

Who Should Teach Reading in High School?

Oscar S. Causey

Principals of representative high schools in one state were requested to furnish information that was considered by the writer to be of value in determining some of the significant factors in the reading background of college students. Principals of high schools of various sizes, both rural and urban, were requested to cooperate. One hundred replies were received promptly.

One request was for comment upon the often repeated statement, "Every high school teacher should be a reading teacher." The following fifty comments are typical of those received.

1. Excellent statement.
2. Not possible or practicable.
3. Yes, this is true even with mathematics.
4. It is a nice idea but hardly true. The average teacher is not prepared to teach reading.
5. True, but most teachers do not have the time for much supervised reading.
6. In senior high school, no. Not practical. Just as well say that all should be a shop, music, or Spanish teacher. Perhaps all English teachers should.
7. As true as can be, but we have few converts. However, we need to get our feet on the ground and do the job we should do before the high school gets them.
8. Ideal, but will never be done.
9. Yes, according to their training and ability. However, specialists are needed in this field and a definite reading program established in speed and comprehension.

10. Too little, too late.
11. Reading can be taught effectively only when it is taught in every class—not in just a reading class.
12. This is an important statement, but is somewhat limited because of lack of reading skills in many teachers.
13. Yes, except that the subject content, areas to be explored, and voluminous cultivation of these special subdivisions of curriculum make concomitant attention mandatory.
14. We will not have a good reading program until this is true.
15. Every teacher is a reading teacher. She teaches the child to get thought from the printed page. Every teacher is concerned with vocabulary development of his particular area.
16. Every high school teacher should be interested in the general improvement of reading, but special training is necessary for remedial work.
17. The statement is true, but so far we have failed to convince the teacher.
18. A teacher would include reading with a multitude of other things.
19. Most all learning in school is dependent upon ability to read. Because of their inability to read, students want the teacher to tell them the answers. Learning through reading is more effective; therefore, teachers need to know how to teach reading to facilitate better reading.
20. I agree. This is not feasible because of the many difficulties involved in high school curriculum, abilities, etc.
21. Anyone who teaches, teaches reading.
22. Good reading habits and skills are cer-

- tainly essential in the learning situation of every high school pupil—therefore every teacher should take proper notice and give due consideration to the reading habits and skills of every pupil in every subject.
23. Most high school teachers are carrying such a heavy load that they are unable to have reading classes. Favor having reading classes and reading teacher giving student credit when he takes reading course.
 24. Developing study skills suitable to each different subject, including various types of reading habits, is the responsibility of every teacher. Teaching remedial reading requires specialized training in methods of teaching reading.
 25. Every teacher should be able to give slow pupils some help in reading difficulty.
 26. This is true, but it oversimplifies the problem.
 27. If a child can read, not just call words, it will help him in any subject he takes, from mathematics to literature.
 28. We subscribe to this statement.
 29. This is important because of the different types of reading requirements in the various subject matter fields.
 30. By all means, every teacher should know and practice the reading techniques pertinent to his or her subject. Science teachers or mathematics teachers will have a different vocabulary, different organization of textbooks, and different methods of reading.
 31. Very few are. Seems that too many feel that students just learn reading.
 32. If students are not taught to read, they are going to make little progress in high school. Surely, every teacher should stress reading.
 33. This is probably true, but the other often repeated statement is equally true, "What is everybody's business is nobody's business."
 34. The statement speaks for itself.
 35. A reading teacher is a specialist. Every teacher cannot teach reading.
 36. In a sense this is true, but, as a general rule, the classes are set up so that attention to reading problems in the classroom is almost impossible. Lack of materials keeps the average high school teacher from being much help.
 37. True, but every teacher cannot do the job reserved for the specialist.
 38. Unless we have a course that has for its primary objective the improvement of reading ability, every teacher must teach reading in his other classes.
 39. In my opinion, the statement is true. We are doing our best to make it a practice.
 40. I believe the statement is true.
 41. Our school does not have an established program for improvement of reading ability.
 42. Could this not be done by each teacher teaching vocabulary peculiar to his own subject, as well as choosing current material and other material appropriate to the subject?
 43. I heartily agree. Especially in high schools where special reading courses may or may not be included in curriculum.
 44. True, but exceedingly difficult to secure.
 45. This should be true. Every teacher could have the opportunity if the proper training had been provided for him or her.
 46. Reading being of fundamental importance in all activities, all teachers should be capable of assisting the student; however, I believe that those teachers who should be especially trained are the English, speech, history, science—those whose courses demand extensive reading.
 47. Every high school teacher is a reading teacher.
 48. Under the present setup this seems to be true. Yet, with adequate reading programs in the grades, it should not be necessary to such an extent.
 49. Not unless he is prepared; not a hit or miss attempt at teaching reading.
 50. There is a definite need for reading improvement in the high schools.
- The principals were also asked to indicate the title or position of the person in charge of reading in their respective schools. The summary of the replies, arranged in descending order of frequency, is as follows: English teacher, reading

teacher, counselor, director of reading program, principal, classroom teacher, director of curriculum, language-arts teacher, read-

ing consultant, supervisor of reading, department chairman, director of clinic, school supervisor.

43

Retention of Reading Skills*

Russell Cosper and Newell C. Kephart

Much attention has been given to the teaching of reading as a skill. Through the use of workbooks, films, slides, and pacers, some rather good results have been achieved, particularly at the college level.

Reading skills have been taught at Purdue since September, 1950, through laboratory techniques. After the first year, which was considered a kind of pilot program, about five hundred students have been enrolled each semester. The course meets for two hours each week with no outside preparation required.

In the one-semester course, the students have twenty-eight to thirty hours of training, and another two hours are spent in testing. Roughly half the total time is spent on the accelerator. Here each student reads books and magazines of his own choice at gradually increasing speeds. Once a week, a film is shown, and at least at every second laboratory period, a difficult essay is read and tested outside of the accelerator. At the time of this study, about ten fifteen-minute sessions were spent with the group tachistoscope; recently, however, we have abandoned this kind of training since it contributed little to student achievement.

Our experience in trying to improve reading skills is much like that of others: reading speed can be substantially in-

creased. Along with the increase in speed, comprehension remains constant or improves slightly. The reasons for these results are rather clear cut, the most obvious being that speed is easier to measure. In evaluating developmental reading, a good case can be made for increased speed and constant comprehension. As a time saver, controlled speed is worth while.

Most reading laboratories use mechanical devices to teach faster reading. Reading films seek to increase span and to teach muscular rhythms. The tachistoscope, which flashes or projects words and numbers at fast speeds, was developed to work directly on span and time of fixation. Accelerators, shadowscopes, pacers—all induce the reader to speed up. In a large measure, these gadgets are forcing instruments; while he is in the laboratory, the student is compelled to read faster.

The question then arises, does the increase in speed achieved during instruction remain with the student? Or after the course is over, does he revert back to his old habits? This study is concerned with one answer to this question.

In the first semester, 1950, 204 students enrolled in Developmental Reading were tested before they received any instruction in reading, and at the close of the semester's instruction, they were retested with an alternate form of the same test. This

* *Journal of Educational Research*, XLIX (November, 1955), 211-16.

group is called experimental. As a control, 208 students who were not enrolled in Developmental Reading were similarly tested. The experimental group had all volunteered for the reading class but were otherwise unselected.

The test used was the Diagnostic Reading Tests, Survey Section. This test yields five scores:

- 1a — Speed in words per minute
- 1b — Recall of details
- 2 — Vocabulary
- 3 — Untimed plus timed comprehension
- 4 — Total comprehension

The reading performance of the experimental and control groups during the first semester, 1950, is shown in Table I. From this table it will be seen that the experimental group achieved a marked gain in reading rate (Score 1a) during their experience in the developmental reading course. In this same period of time the control group, which did not receive specific instruction in reading, remained approximately constant in reading rate. The small gain which they made was not statistically significant.

It will be noted that the initial level of the control group was somewhat higher than that of the experimental group (means of 280.3 and 267.1 respectively). This is to be expected since all members of the experimental group had volunteered for the developmental reading course and presumably these volunteers would be primarily from those students whose reading level was lower and who, as a result, were aware of the problem.

Neither group showed any marked change in comprehension (Scores 1b, 3 and 4) except in vocabulary (Score 2) where the gain made by the experimental group was significant at better than the five percent level of confidence.

In January, 1951, the developmental reading program for the experimental group of students whose scores are shown in Table I was completed. Fourteen months thereafter (March 1952), all students in this group were sent a notice inviting them to return for retesting. Thirty-eight students accepted and were retested. A similar notice was sent to all students in the control group of Table I. From this

TABLE I. CHANGES OVER THE PERIOD OF THE DEVELOPMENTAL READING PROGRAM FOR THE TOTAL SAMPLES

Test	September 1950		January 1951		Gains	
	Control	Experimental	Control	Experimental	Control	Experimental
1a	280.3	267.1	305.3	433.8	25.0	166.7**
1b	80.3	79.7	81.1	75.6	0.8	-4.1
2	46.2	47.8	47.6	50.5	1.4	2.7*
3	30.5	30.5	30.4	29.9	-0.1	-0.6
4	76.7	78.3	78.0	80.4	1.3	2.1

** Mean significant at the 1 per cent level

* Mean significant at the 5 per cent level

TABLE II. MEAN SCORES AT THE THREE TESTING PERIODS FOR THE EXPERIMENTAL AND CONTROL GROUPS WHO WERE RETESTED

Test	Control Group (N = 28)			Experimental Group (N = 38)		
	Sept. 1950	Jan. 1951	March 1952	Sept. 1950	Jan. 1951	March 1952
1a	284.8	320.1	290.1	285.1	442.5	378.5
1b	79.5	84.3	82.2	82.8	77.4	79.4
2	49.1	50.4	47.5	48.7	52.5	49.2
3	31.1	31.7	32.5	32.1	31.4	32.0
4	80.2	82.0	80.0	81.0	83.9	81.3

group 28 students returned and were retested. By using a third form of the Diagnostic Reading Tests, scores were obtained from which means were computed indicating the reading level of these retest groups after a lapse of fourteen months. The results are given in Table II.

Table II shows the mean scores for these retest groups at all three testing periods. The control group showed a very slight gain in speed of reading whereas the experimental group showed a rather substantial gain. Comparison of Table II with Table I reveals that in general the means for the smaller retest groups of Table II follow the same trends as the means for the larger total groups of Table I.

In order to determine whether the two small groups were representative of the original experimental and control groups, a chi-square test of goodness of fit was undertaken. This test was limited to the data from Score 1a since the changes observed in the other scores were too small to be significant in any event. Distribution curves of the original experimental and control groups were fitted to the distributions of the respective small samples with the following results. For the experimental group chi-square was found to be 5.51 with four degrees of freedom (necessary for the 5 per cent level of significance, chi-square = 9.49). For the control group chi-square was found to be 3.52 (necessary for the 5 per cent level of significance, chi-square = 7.82). We may therefore conclude that the small samples of Table II are representative of the larger samples of Table I.

Since these samples proved to be representative of their respective populations, it was feasible to perform tests of the significance of the differences found. For this purpose, the mean differences between the 1950 testing and the 1952 testing were de-

termined by computing the gain made by the experimental group less the gain made by the control group. These mean differences along with their standard errors and *t*-values are shown in Table III. It will be seen from this table that in reading speed (Score 1a) the experimental group gained significantly more than the control group ($t = 5.45$). No significant differences between the groups were observed in any of the remaining four tests. It can therefore be concluded that the group of students who experienced the developmental reading program increased their speed of reading and that a significant amount of this gain was retained after an interval of fourteen months. Reference to Table II reveals that of the initial gain resulting from the training, approximately 60 per cent was retained.

SUMMARY AND CONCLUSIONS

A group of 38 college students who had taken a one-semester course in developmental reading were retested fourteen months after the end of the course to determine to what extent reading skills developed during the course were retained. A group of 28 students who did not experience any formal reading training were used as controls. The results indicate that:

TABLE III. NET GAINS SHOWN BY THE EXPERIMENTAL GROUP OVER THE CONTROL GROUP FOURTEEN MONTHS AFTER THE END OF THE DEVELOPMENTAL READING PROGRAM

Test	Mean Difference	Standard error of Mean Difference	<i>t</i> -value
1a	88.1	16.2	5.45
1b	-6.1	4.2	1.45
2	2.1	1.4	1.46
3	-1.5	1.1	1.36
4	0.5	2.0	0.25

Some "Musts" Ahead in Teaching Reading*

A. Sterl Artley

Where have we come from; where are we going in the teaching of reading? Since the Department of Elementary School Principals published its Seventeenth Yearbook titled *Newer Practices in Reading in the Elementary School* in 1938, a great deal of progress in methods of teaching reading has been achieved. The concept of readiness for initial reading instruction has had widespread application. Individual differences and their relation to the reading program are better understood, particularly by teachers of the primary grades. Greater recognition is being given to the importance of a skill sequence in the reading program and to the need for sound and systematic teaching. In these and other respects progress over the past decade and a half is evident.

But the end of the road is not in sight; nor is it likely that it ever will be. For in any area of development—agriculture, medicine, merchandising—advancement is promoted by appraising progress, and realistically and objectively considering the next steps that must be taken if future growth is to be insured. So it is with reading instruction. Some noteworthy advances have been made, but what lies ahead? The following represent one writer's opinions on this challenging question.

CONTINUED ATTENTION TO SKILLS

Certainly there must be continued attention to the skills of reading. It is a recog-

* *National Elementary Principal*, XXXV (September, 1955), 2-6.

nized fact that learning to read involves the acquisition of known skills, abilities, and understandings relating to areas such as word perception and interpretation. Admittedly, the skills and abilities involved in reading are only the means to ends: the full and complete interpretation of printed symbols, the acquisition of new ideas, and personal and social growth. Yet it is impossible to attain these ends of reading, as important as they are, without the know-how, the ability to engage in reading skills efficiently.

The last decade has brought about an understanding that the teaching of a reading lesson is not a procedure by which the teacher listens to children orally regurgitate prelearned material. Current procedure provides for the development of a sequential skill program. The future must see this skill program strengthened to the point where all teachers recognize its importance and are committed to the attainment of known reading goals.

GROWTH GRADIENTS DETERMINE PROGRESS

All people connected with the reading program must understand that, as children grow in any area of development, so do they grow in reading. Development in walking or talking, for example, is a sequential process. Each gradient of growth leads into the next. Each stage of development is both forward looking and backward looking—forward, because it paves the way and provides a foundation for

future growth; backward, for it finds in the past a hierarchy of growth sequences which serve to sustain the present level of development. Thus, also, does reading follow a sequential, spiral course of development—step by step, level by level. As in any other kind of growth, progress on any given level is conditioned in part by the kind of growth that has preceded it. At the same time, any given level of reading attainment is a foundation—firm or weak—for the level that follows.

The teacher should see his job as one of promoting the kinds of reading growth that will enable the children to be successful on levels following the one on which he is teaching. Let us say, for example, that he is teaching a group on the 2¹ level. His job there is not only one of developing abilities to serve the reading purpose on the level on which he is teaching, but of fostering the kind of growth and development that will enable the children to be successful on the 2² level. He is a readiness teacher.

INDIVIDUAL DIFFERENCES CHARACTERIZE ALL LEVELS

The third "must" is a corollary of the second. From here on out we must do more than pay lip service to the concept of individual differences as they relate to the reading program. Particularly must this be done in the middle and upper elementary-school grades, not only because the spread in pupil abilities is wider here, but because observation indicates that on these levels teachers are still inclined to see their children in terms of "grades" rather than as individuals with widely varying capacities, interests, and needs.

In reading, as with general growth, each child follows his own timetable of development. Each child sets his own pace in moving along the reading growth spiral. Sound teaching must respect his individual growth pattern and must pace the instruction so that he advances successfully at his own rate. It is recognized that by the time

children arrive in the middle grades, the ranges of achievement and needs are greater than in the primary grades. This complicates somewhat the technics of grouping as worked out by the primary teacher. However, the basic problem exists, and it can never be solved by retreating to the traditional pattern of wholesale teaching. New technics that will permit teachers on *all* levels to teach each child in terms of his own potential for growth may have to be worked out.

PROMOTING INDEPENDENCE IN WORD PERCEPTION

Attention must be given in the future to promoting growth in independence in word-perception by developing competence in a variety of recognition technics. If the child is to be free to respond to the ideas presented in books, he must develop a growing ability to apply word-attack skills as part of the whole reading process. Such a program will have its beginning in the pre-reading program with attention to auditory and visual discrimination. It will continue through the early stages of learning to read while the child is acquiring a basic stock of sight words. He grows further in independence as he acquires facility in using meaning, word-form, phonic and other structural clues, and the dictionary.

No one of these devices can be said to possess sufficient merit to warrant its sole use in unlocking words. The English language is simply not constructed in a manner that will permit any easy approach to word recognition. One cannot admit as sound a program that goes overboard in promoting, in a cultish fashion, a single procedure, whether it be phonics or something else.

READING IS RELATED TO WRITING, SPEAKING, AND LISTENING

Instructional practices of the future must give increased attention to the inherent relationships that exist between reading and

the other communication areas. Reading is only one area of language. The other three are writing, speaking, and listening. As such, reading lends support to and receives support from development in each of the other areas. As a result, reading activities might well serve as a pivot around which to relate many activities in writing and speaking. It is a "natural" for the purpose of developing listening abilities. On the other hand, reading is facilitated as the children grow in both oral and written language; as they become familiar with the total communicative process.

ATTENTION FOR THE GIFTED CHILD

More attention must be given to the reading needs of the gifted child. Though the gifted child may not have reading problems, he does have reading needs. He needs opportunities to develop reading maturity commensurate with his accelerated capacities. He needs opportunities to solve problems thru the medium of reading. He needs opportunities to do "research" reading and to report his findings to the group. In short, he needs stimulating situations where his superior reading ability may be put to use in a functional manner.

Because the squeaking wheel gets the oil, we are inclined to give major attention to the slow learner and the retarded reader. The bright child is entitled to an equal effort on our part. If he achieves on a level only as high as the norm for his group, his full reading potential goes unused. This loss must not occur.

READING IN CONTENT AREAS

The reading program of the future must give more attention to the development of reading and study skills as they relate to each content area. Reading skills and abilities fall into two classes—those that are specific to a formal reading program, and those that are general, or have common application to several areas of study. Word-perception abilities and the basic skills of

interpretation fall in the first category. Obviously, skills such as these can best be developed thru the basic reading program. Other skills and abilities are more closely related to the content of specific subject matter areas. The interpretation of map symbols in geography and simple formulas in arithmetic are examples of abilities of this latter type. It is equally obvious that these abilities should be developed in the context and thru the content of each area as the need arises.

READING ENRICHES CHILDREN'S LIVES

Finally, there must come the growing realization that, as important as growth in reading power may be, such growth is significant only in so far as it enables the child to enrich his experiences and to grow personally and socially. Reading has served its highest purpose when through it children become better, stronger persons. To achieve this end, reading must "come alive" for the child. It must be a medium through which he experiences richly, as richly as if he were actually taking part in the story. Achieving this goal of personal development requires that children learn to project themselves into story situations; to share the characters' moods and emotions; to create vivid sensory images of sight, sound, movement, touch, and smell. And, because the child lives richly the content he reads, he comes to formulate guiding principles that he uses in his own personal and social life. In this manner the child is not only taught to read, but also, through reading, taught to live.

DETERMINATION TO OVERCOME PROBLEMS

Unfortunately, as one discusses what he would like to see in the way of future reading emphases, he must face realistically the limitations of increased class size, half-time sessions, inadequately trained teachers, and reduced physical facilities. All too

often "musts" are reduced to the level of "hopes." The real danger, however, is not so much the existence of limitations, as it is that they may become the basis for ra-

tionalizing our lack of progress. Future growth depends on clearly defined goals along with the determination to work toward them in spite of conditions.

III

Phonics

PHONICS

The use of phonics as a method of teaching has been a highly controversial issue in American schools since the passing of the Blue Back Speller. The advocates of the use of phonics in teaching reading suffered their severest losses during the 1930's when the progressive educationists converted the schools, as fully as the older teachers would permit, into socialized activity schools in which the proposed approach to the acquirement of learning was through activities, interest, and happiness of the children. The task of learning phonics was classified as a "discipline" and therefore was ordered to the discard by the progressives in many school systems by administrative fiat.

The cause of phonics might have been lost during the third decade of the twentieth century except for the fact that many teachers, in spite of the trend of the time, continued to use phonics sub rosa in teaching reading.

The teacher education institutions accepted and aided in the enlargement of a philosophy of education based on activity, socialization, excursion, and personality development to such an extent that learning phonics and learning to use phonics in teaching reading was all but excluded from teacher training along with some other disciplines. As a result thousands of teachers in the schools today have never learned phonics, as such, nor how to use phonics in teaching.

During the 1940's, several series of readers still in current use in the elementary school grades attempted to change the situation by including, in the instructions for teacher use of the readers, directions for the use of phonics methods. The results were not as pleasing to the authors of the reading books as they hoped for, because the teachers of prospective teachers had not been released from the grip of the socialized-activity philosophy of learning and teaching that had been developed and largely accepted during the two preceding decades.

Pressure from the public, which is often the cause of change in a democracy's schools, was effective in increasing the emphasis upon the use of phonics in teaching reading at about the middle of the present decade. This change because of public demand is not without precedent. The public plea that "high school education should be useful as well as ornamental," resulted earlier in this century in, among other things, the addition of typing, shorthand, bookkeeping, and other commercial subjects to the high school curriculum. Only a little later the demand was made for transporting rural children to school with the result that today there are enough school buses in operation to form a line more than a thousand miles in length if the buses were lined up bumper to bumper. Numerous other changes could be cited.

But seldom has public demand been effective so quickly and on so broad a scale as in the case of teaching phonics. The chief cause is not difficult to identify—a book. Very rarely does a book on education become a best-seller. Such a book was written in 1955 and very soon after coming off the press became a best seller. It is an attack upon the lack of use of phonics in teaching reading. Parents read *Why*

Johnny Can't Read by Rudolph Flesch and became very vocal. Editors read it and became verbal. Teachers read the book and became vehement. School administrators listened to parents and became repentant. The extent of the reaction to the volume is easily understood when one realizes that the author brought into perfect play the seven well known basic principles of writing propaganda.

Adverse criticism of Flesch's recommendations for teaching reading were as widespread as were meetings of reading teachers during the year following the appearance of the volume. Almost every speaker at the meetings used the occasion to say, as Shakespeare had the Jew say in *The Merchant of Venice*, and with little, if any, less venom, "I will take my pound of Fles(c)h."

The controversy, as in most controversial issues in education, is being resolved by all who are concerned coming to the conclusion that reading cannot be well taught without phonics nor can it be taught well by phonic methods alone. It may not be too much to predict that in the not too far distant future, parent-teacher organizations will move to erect a monument to Rudolph Flesch for the motivation to thinking and action he created by his little book, even though he did employ propaganda techniques in a book on education.

The pages that follow may have genuine value to the teacher in establishing a better understanding of the place of phonics in the teaching of reading.

Teaching Johnny To Read*

William Morris and Emmett A. Betts

Editor's Note: The popular misconception that books that deal with the subject of education are all dull, albeit well meaning, was dramatically exploded by a book published by Harper & Brothers. *Why Johnny Can't Read* by Rudolph Flesch, a Ph.D. from Teachers College, Columbia University and author of many books on writing, is a scalding attack on the methods by which the subject of reading is being taught in American schools.

THE BOOK

Why Johnny Can't Read is a short, well-organized book, divided into two distinct sections. The first section contains Mr. Flesch's analysis of why he thinks schoolchildren today are incapable of reading as well as he would like them to read. The second contains Mr. Flesch's own primer of phonics for teaching children to read. Both sections are highly critical of educators for using "modern" methods of teaching reading.

"Let me spell out in so many words what I am trying to say in this book," Mr. Flesch writes in the first section of his book. "Your child's trouble with reading comes solely from the fact that in school he has been taught word guessing instead of reading—and by reading I mean getting the meaning of words formed by letters on a printed page, and nothing else."

The trouble with modern methods of teaching children to read, says Mr. Flesch, is that they are taught to memorize words, not to read them letter by letter. "We have

decided to forget that we write with letters and learn to read English as if it were Chinese," he says.

"If a child isn't taught the sounds of the letters, then he has absolutely nothing to go by when he tries to read a word. All he can do is guess. Suppose a child tries to read the sentence, 'I saw a kangaroo . . .' If he has been trained in phonics, he simply 'sounds out' the [letters] and reads 'kangaroo' as easy as pie." But says Mr. Flesch, today's schoolchildren are not being taught the sounds of letters. They have to guess at them. As proof of his argument, he cites the examples of children in some schools he visited while he was writing his book. These children, he says, could not tell the difference between the words "ancient" and "accident." One girl read "said" instead of "jumped," and one boy, who was learning to read in a class where flash cards were used, recognized the word "children" only because the particular card with the word "children" on it had a smudge at the corner.

To bolster his theory of the need for phonics, Mr. Flesch also visited a school where old-fashioned phonics were taught. "These children," he says, "did *not* go through the ritual that I had seen performed dozens of times in another school. They did *not* chant words, one by one, laboriously and insecurely, in a monotonous, one-word-after-another sing-song. Instead, they did something that I have seen done in no other classroom. *They read the*

* *Saturday Review*, July 30, 1955.

story. They went through the pages at a pretty fast clip, with completely natural intonation, laughing spontaneously at one place, expressing surprise at another, following the thread of the story with animated suspense."

Mr. Flesch proposes that parents teach their five-year-old children to read before they enter school in order to offset the disadvantages of the present-day teaching methods, and the second section of his book is devoted to a series of seventy-two word lists which the child should sound out as he copies them from the book. The words are grouped by phonic elements, the first list, for example, containing ninety three-letter words containing the short vowel *a*. For parents who are uncertain of their own ability to teach reading to their children, Mr. Flesch says, "You paint your living room. . . . Why not take on instruction in reading? Surely you can do a simple job like that." And, as proof that a parent can do so, he includes some sample material from the type of primer used in today's schools. The implication: that anybody can teach reading to a child better than such gibberish can teach him. The sample material which, according to Mr. Flesch, is supposed to achieve its effect by repetition:

Father said, "I want something. I want to get something. Something for the car. We can get it here."

"Oh, Father," said Sally. "What do you want? What do you want for the car?"

Father said, "You will see. You will see."

Up, up went the car. "Oh, oh," said Jane. "See the car go up. The car can go for a ride. It can ride up."

Sally said, "Oh! See Tim! He went up, too. He and Spot and Puff went up."

Sally said, "Look, Father! Spot and Puff want to jump. Please make the car come down. Can you make it come down?"

"Yes, Sally," said Father. "We can make the car come down. We will get Spot and Puff and Tim." . . .

Though Mr. Flesch has quoted the above story without benefit of the pictures

which accompanied it in the actual textbook, he still considers it gibberish. It is a wonder, says Mr. Flesch, in an educational system where such "stories" are regarded as necessary because no basic phonics have been taught, that our Johnnies are not considerably less adept at the art of reading than they actually are.

PRO

By William Morris

This year a major state university in the Midwest has had to schedule forty-three classes in Remedial English—which can only mean that it can fill forty-three classrooms with pupils of college age and intelligence who cannot adequately read, write, and spell. Is it any wonder, then, that parents the length and breadth of the country have been perplexed and angry at the failure of the schools to teach otherwise intelligent children how to read and write? Is it to be wondered at that after receiving from their child's teachers bland and condescending rebuffs—usually couched in academic gobbledygook—they have greeted with such enthusiasm the appearance of Rudolf Flesch's *Why Johnny Can't Read*? For here they find a lucid and thoroughly documented explanation of the origin of this shocking situation—and the reasons why it will persist unless and until the entrenched educators start to pay some heed to the protests of aroused and informed and suffering parents.

Mr. Flesch has done a more than reasonably thorough job of documenting his work—frequently quoting passages from educational journals and from the published monographs of the reading "experts." One suspects that the authors of some of the passages quoted by Mr. Flesch are now smarting at the revelation of their fundamental nonsensicality when exposed to the light of public print. As an example, note this statement from a university "expert" on reading: "Current practice in the teaching of reading does not require a knowledge of the letters [of the alphabet]."

... In remedial work such knowledge is helpful." In other words, try to teach the child to run before he walks. After he has fallen down sufficiently often that it becomes obvious that he needs "remedial work," teach him to take one step at a time.

Among advanced English teachers and on college faculties, Mr. Flesch has many supporters. A professor of linguistics at a leading Eastern university writes: "Flesch has given the public a clear, well-reasoned, convincing account of the present mess in reading and how we have gotten there. It was about time somebody did just this." And the children's librarian in a major Southern public library writes: "*Why Johnny Can't Read* makes articulate in understandable language to the lay reader what thousands of intelligent people have been trying to tell educators for many years." Indeed, it sometimes appears that the aspect of this book which rankles the reading "experts" most deeply is the fact that its author is himself a Ph.D. from Teachers College, Columbia University—the fountainhead from which the "sight" and "word-recognition" theories were first enunciated.

More important, however, are widespread indications that Flesch's book has already begun to have a remedial effect on educators. I have before me a clipping from *The New York World-Telegram* headed "Reading Instruction Everyone's Business" and containing this paragraph about a meeting of New York City public-school principals: "The controversial matter of teaching reading by phonics instead of word recognition came in for considerable discussion on the program." Without retreating completely from support of the "sight-reading" method, the conclusion was that "for most children the teaching of phonics should start in the first year."

The second part of Mr. Flesch's book, headed "What You Can Do About It," consists of a series of exercises and phonic drills designed for use by the parent with

his child, preferably before the child enters school. What each parent should do is to study this teaching material with care and then work it regularly into daily play with the preschool child. When your youngster asks how to spell his name or the names of his friends and pets, help him learn the value of each letter by teaching him to enunciate each syllable as he writes. "Reading readiness" experts to the contrary, any reasonably intelligent child is ready and eager for this simple word-play at age four or five, providing he has learned his alphabet from an "old-fashioned" mother or grandmother.

If enough American parents read and follow the precepts that Mr. Flesch so effectively sets forth *Why Johnny Can't Read* may well be ranked the most important contribution to the betterment of public-school teaching methods in the past two decades. Hundreds of thousands of parents, inarticulate in the face of the pompous and condescending "explanations" of the educators, have at last found a highly articulate and very well-informed spokesman. The sparks have begun to fly, and unless I miss my guess, the results will be beneficial to every educator, pupil, and parent of every pupil.

CON

By Emmett A. Betts

Flesch has written a readable book that has immediate appeal to parents—especially those parents whose children are having difficulty in learning to read. He has made articulate a large group of parents, many high school teachers, and some elementary school teachers who want something done about beginning reading. Moreover, he has challenged educators to do some serious thinking about word perception in reading and spelling.

Flesch is a journalist, making no claims to being a classroom teacher, an educationist, a reading specialist, or a competent statistician. In fact, he tells us that he has

taught only one boy to read—"not perfectly" (p. 1)—and his five-year-old Ann (p. 9). From his reported experience, he makes generalizations regarding all children: visual aphasias, remedial, corrective, mentally retarded, emotionally disturbed, visually handicapped, gifted, sub-normal, brain injured, etc.

This book deserves attention not because it is a contribution to the improvement of reading but because it raises basic issues. For example, critical readers are confronted with these questions:

1. Should children be drilled on phonics (for weeks, months, or years) before they are permitted to read?
2. Is learning to read merely a process of pronouncing words, without understanding?
3. How much should phonic skills be emphasized in the beginning stage of reading?
4. Is reading ability improved by drilling on words in isolation from meaning?
5. Are all children ready for reading at age 5?
6. What is the contribution of phonic skills to word perception?
7. What is the relationship between needs recognized by the learner and learning?
8. What does meaning contribute to the learning and retention of word perception skills?
9. Do all children profit equally from systematic guidance in phonics?
10. Is there one *cause* of all reading disabilities?
11. Is phonics *the* cure for all reading disabilities, regardless of the cause?
12. What background does a teacher need in phonetics in order to do a good job of teaching phonics?
13. What should the teacher know about word perception in order to teach phonics effectively?

Flesch has made a vicious attack on all schools in the United States. He has been reckless in quoting his selected allies and scape-goats out of context. He has deliberately stated his personal *opinions* as *facts*. He has made statements which he must

know are contrary to facts. He drew distorted and unwarranted conclusions from reports. Worse still, he has used absolute terms where common sense as well as facts would dictate the use of relative terms.

Here are a few of his fantastic statements:

1. "The teaching of reading—all over the United States, in all schools, in all textbooks—is totally wrong . . ." (p. 2)
2. ". . . there are no remedial reading cases in Austrian schools . . . in Germany, in France, in Italy, in Norway, in Spain . . ." (p. 2)
3. "Teach the child what each letter stands for and he can read." (p. 3)
4. "Now with the alphabet, all you had to learn was letters." (p. 4)
5. "If we want to read materials with a vocabulary of 10,000 words, then we have to memorize 10,000 words . . ." (p. 4)
6. ". . . all the words in it (a reader) are learned by endless repetition." (p. 5)
7. "The primers and readers are keyed to the textbooks on how to teach reading, and the textbooks are all carefully written so that every teacher in the land is shielded from any information about how to teach children anything about letters and sounds." (p. 12)

The above statements are just a starter on the hundreds of completely false and twisted statements made by Flesch. While Flesch admits to being a journalist and not an educator or a psychologist, he raises grave doubts about his responsibility as a reporter.

It is difficult to believe that either Rudolf Flesch, the author, or Harper & Brothers, publishers, were the least bit interested in improving the lot of the retarded reader. In fact, it is our belief that followers of Flesch will now overload our reading clinics.

Flesch is a clever, though not profound, writer. He very cleverly manages to group all "methods" as either *phonic* or *word*. Then with unjustified confidence he ham-

mers home the idea that his "natural" method is the only way to teach phonics.

On page 46 Flesch rolls up his sleeves and demands that the long-dead John Russet Webb report the research on which he based his method. Of course, Webb cannot rise from his grave to defend his idea. Furthermore, no educator today will defend it. But Flesch, having neglected to report the research on his "natural" method, redoubles his efforts to brow-beat his reader into accepting his *unproven* and *unwarranted* distortions of fact.

Unfortunately, too few educators are prepared to identify and evaluate the issues in psychology, education, and linguistics unintentionally raised by Flesch. Although Flesch's logic is clear, it is also pathic in terms of its relevance to education. To detect his distortions and slanted writing and

to point the way to sane and sensible methods of teaching reading requires an intimate knowledge of hundreds of researches, a scholarly perspective on the history of reading instruction, and a first-hand knowledge of current practices in different schools and different classrooms.

While the intent of both Rudolf Flesch and his publisher, Harper & Brothers, may be questioned, there is some positive value in this book. It brings out into the open many false opinions about what is wrong with the schools by offering a cure-all for one *symptom* rather than by getting at the *causes*. This book by an irresponsible author gives alert and competent educators the opportunity of the century to present facts on their programs and to enlist the efforts of sincere parents in the improvement of them.

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Phonetics or Phonics?*

Frank B. Robinson

Classroom teachers are often puzzled by the terms *phonetics* and *phonics*. "Aren't they synonymous?" some ask. Others say, "No. Phonetics is concerned with sounds, while phonics teaches about whole words." Or one may hear, "Phonics is for some children who can't read well. Phonetics is for those who can't talk right." Frequently, when the speech correctionist presents examples of work used in helping children who have difficulty with consonant sounds, teachers exclaim, "Why, that sounds just like the phonics we use."

* *The Reading Teacher*, IX (December, 1955), 84-88.

Are they really the same? If not, how are they different? Should the teacher who wants to use phonics know anything about phonetics? If so, what?

PHONETICS AND PHONICS ARE DEFINED

Phonetics may be defined as the scientific study of the sounds (broadly classified as consonants and vowels) used in talking. There are about fifty of these recognizable units in English speech. The distinguishing characteristics of these phonemes, as the separately identifiable sounds are called, is a major concern of the phonetician.

Phonics is actually an application of phonetics to reading and spelling. As you know, talking precedes reading. Each child brings to the reading program a set of sound patterns already more or less established. The symbols of reading, usually taught orally, must be superimposed upon those of speech. Confusions occur when the written letters do not consistently agree with the auditory symbols. Difficulties may also appear because some children bring an undeveloped or faulty sound system to the reading program. Phonics is aimed at solving associated problems. Phonics involves the sound studied in phonetics but it is also concerned with the symbols that represent those sounds in written words. The teacher of phonics is helping children learn how to translate the letter symbols into the appropriate sounds and to integrate sound patterns already learned with visual forms. Since those sounds that form the subject matter of phonetics are an integral part of phonics, information about their nature and conditions that may interfere with their acquisition should be of interest to the teacher of phonics. Just what and how much information might be most useful is problematical. The purpose of this article is to present some information about the learning of sounds and what some of the more recent studies by phoneticians have revealed that might be helpful.

SOUNDS ARE LEARNED GRADUALLY

The sounds used in talking are learned gradually and some tend to be acquired before others. The vowel sounds are mastered first, then the front-and-back tongue sounds, then the more complicated lip and tongue sounds, and finally the blends. The following ages by which children normally are able to articulate effectively the various groups of consonant sounds have been fairly well established: by $3\frac{1}{2}$, the *b, p, m, w,* and *h*; by $4\frac{1}{2}$, the *d, t, n, g, k,* and *ng*; by $5\frac{1}{2}$, the *f* and *v*; by $6\frac{1}{2}$, the *sh, th, ch,* and *l*; and by $7\frac{1}{2}$, the *s, z, r,* and *wh*.

In a longitudinal study with 480 children between the ages of 2-6, M. C. Tempelin concluded that at seven years all consonants, including the blends, are correctly articulated about ninety per cent of the time. That investigator also corroborated what others had found about the inconsistency of articulation with regard to the position in a word in which a sound appears. For example, where a consonant appears at the beginning or in the middle portion of words, accuracy will be attained sooner than when the sound occurs at the end.

Thus we see that the acquisition of acceptably produced sounds in speech is the culmination of a process that continues well into the primary grades. Errors may still be expected in the second and even occasionally in the third grade. By this time the learning of reading has begun. Sound symbols must be integrated with the visual ones in the written words. But in many instances, even with the normal child, the sound symbol system is not yet fully established. The resulting confusion appears to be one of the important reasons for phonics.

Difficulties encountered in the learning of the sounds of speech may be due to a variety of conditions. Among those believed to be most common are less well developed neurological or muscular systems. Other conditions that may intrude include intellectual handicaps, vision disorders, emotional disturbances, and cortical lesions. The work of experimental phoneticians provides information about two more factors that may help us understand why the speech of some children includes mislearned sounds. The result of such work may also have implications for phonic materials and procedures.

NATURE OF BASIC CHARACTERISTICS OF SOUNDS

One of these areas of investigation concerns the basic nature of sounds. It has long been known that disturbing confusions can occur because some of the sound

elements are acoustically similar. Examples are *f*, *th*, and *s*, *t* and *k*, *d* and *g*, *b* and *v*. Because of these similarities, children may make such errors as "sum" or "fum" for thumb, "tootie" for cookie, "goggie" for doggie, etc. These kinds of errors tend to persist until the child is able to perceive the subtle differences among the sounds involved. And the errors occur even with children whose hearing acuity is adequate and who are normal in other important respects. The difficulty is simply a reflection of one of the basic characteristics of sounds.

More recent investigations have been concerned with a related characteristic of sounds. Evidence is increasing to indicate that the individual consonants and vowels may have different properties, depending upon the sounds that precede or follow. For example, the consonants of *tab* are apparently not the same as the similar sounds in reverse order (*bat*). While some information about this transient nature of sounds has been available since the early part of the present century, it wasn't until the relatively recent development of the Spectograph and magnetic tape recorders that detailed analyses of sounds could be made. These instruments have made it possible to "see" as well as to hear speech, and by cutting and splicing tapes, minute segments of sound, as well as an infinite variety of prepared and controlled combinations, may be studied.

Let us see what has been found. W. R. Tiffany experimentally manipulated duration, pitch inflection, and phonetic context with four vowels recorded on tape. Results indicated that perception of the vowels tested was highly affected by those conditions. In other words, vowel sounds may be perceived differently as they vary in duration, pitch inflection, or phonetic context.

Others have explored consonants. F. S. Cooper and his associates found that acoustic patterns for various synthetic consonants varied as the following vowel was

changed. The results indicated that certain consonants may be correctly identified even though a person hears only the following vowel! C. M. Harris performed some interesting experiments in which tape recorded words were cut in such ways as to detach consonants from the vowels with which they had been recorded. The consonants were then played back attached to different vowels. He found that the consonants, thus interchanged, could be recognized only if they were arranged according to certain rules. And G. J. Harbold, also exploring the transitional influences of sounds upon each other, reports results that further support the notion that perception of sound elements is affected by the particular combination in which a given sound occurs.

Such information suggests that some children come to the reading program with misperceptions caused by this characteristic of sounds as they occur in combinations. It may also be true that phonics, as sometimes taught, may actually serve to further confuse some children. Sound combinations which to adults have become stabilized through repeated conditionings, may not be perceived by the child as we assume they should be. The integration of sound and visual symbols required for reading thus becomes more difficult. Much additional information is needed before broad applications can be made, but it is possible that phonic materials as used with some children need to be planned and applied with such information in mind.

PERCEPTION OF SOUNDS IS NECESSARY

The second area of interest to the phonetician concerns another, quite different, condition that influences the perception of sounds. As you no doubt know, learning to talk most importantly involves imitation. The infant hears what others say and proceeds to produce sounds himself until they are acceptably similar to those he hears. Inherent in this process is the act of

listening to one's own speech. The hearing mechanism serves as a device not only to permit the receiving of sounds produced by others but also as a monitor for our own talking. Almost as soon as a word is pronounced, it is heard by the producer and compared with memories of previous performances. What is done about sounds just produced depends upon what one hears himself say. If the sounds fit previous information about correctness, the talker continues. If, however, something is different, attempts at correcting are likely to occur. This self-correction, made possible by self-hearing, is a vital part of learning to talk. Examples of the process are encountered frequently by teachers in the elementary grades: "Teacher, I need some salk—I mean chalk." "This morning I saw a wabbit—rabbit." "Look at the efuh-lunt—uh, elepunt—no, uh, el-e-phunt."

The self-hearing experience has been labelled *side-tone*. Sidetone is the result of receiving sound by way of three different channels. We hear ourselves as the sound is carried to the ear (1) directly through air from mouth, (2) indirectly through air as the sound travels out, strikes against walls and other reflecting surfaces, and back again, and (3) through bone and tissue of the head. Other ears receive our speech only through the first two channels. This is why your own speech can never sound to you as it does to anyone else.

The side-tone experience can affect speech in a number of ways. You may have heard about the instrument that can make almost anyone "stutter." It is accomplished by delaying the time between the production of a word and the side-tone. If the delay is great enough, some individuals become completely unable to continue talking. It has been suggested that stuttering, at least in some instances, may be due to an inherent condition of side-tone in which

words are effected by such a delay. Other studies have demonstrated additional effects that the side-tone experience can have upon one's speech. In general, it may be said that side-tone can distort sounds produced by the talker. Further study may indicate that certain types of errors made by children in talking and/or reading are related to side-tone experiences.

SUMMARY AND CONCLUSION

To summarize, two areas of research in phonetics have been briefly discussed. They are concerned with problems directly associated with the sounds of speech. It is these same sounds with which the teacher must be concerned as she attempts to help children with reading through phonics. It is these sounds as they occur in words which must become appropriately associated with the written symbols. Talking and reading both require proper perceptions, the one of auditory symbols, the other of visual forms. The symbols of speech are learned first and then must be integrated with those of the written letters. Phonics may be of greatest importance to those children who come to the reading lessons with undeveloped or faulty auditory perceptions. The work of phoneticians can tell us much about the characteristics of sounds and conditions involved in perceiving them that will help explain why many children have difficulties. Such knowledge can be utilized in the planning and applying of phonic materials.

In conclusion, it can be seen that, while phonetics and phonics are not synonymous, they are obviously closely related. And while it is possible to use phonic projects with little knowledge of phonetics, the interested teacher would no doubt discover much from a study of the subject that would help improve her work with that important aid to reading.

The Phonetics of Phonics*

Anna D. Cordts

Interest in phonics had reached an all-time high in the nation's schools before the public had heard the name of Rudolf Flesch. Administrators and teachers alike have been looking to phonics as a means of improving the reading in their schools. It is not phonics that is being over-looked, but the teachers' inability to teach it intelligently. Students are being graduated from our teacher-training institutions without knowledge of the science of phonetics, or its application to the teaching of reading. It is little wonder then that phonics is among the most poorly taught subjects in the elementary school.

CONFUSION BETWEEN SOUNDS AND LETTERS

If you are a teacher who can hear the sounds in a word regardless of the letters that represent them, you are among the few who can. The inability to distinguish between sounds and letters accounts for pitfalls like the following in the teaching of phonics.

The assignment required a ring to be drawn around every "ow" having the sounds as in the word *owl*. "Isn't it wonderful?" the teacher announced after having checked the children's workbooks. "Just look what these little children can do. Nearly everyone got all the sounds right!"

Nearly everyone had encircled all the "ow's" on the page not only those in *owl*,

* *The Reading Teacher*, IX (December, 1955), 81-84.

cow, brown, clown and *growl*, but the "ow's" in *grow, flown, snow, grown* and *low* as well!

"Oh, dear!" Mrs. Brown sighed, when the children's errors were pointed out to her. "Of course I can see it now. That's what comes from never having been taught phonics. Honestly, I don't know one phonic from another!"

Never having learned to discriminate between the visual and auditory perception of words, Mrs. Brown, like many other teachers, was *hearing the words with her eyes*.

If you can distinguish between sounds and letters you should be able to detect the errors in this assignment.

1. Find the little word *an* in *thanks*; find *is* in *island*; *on* in *iron*; *all* in *shall*; *but* in *butcher*; *of* in *often*; *sure* in *pleasure*.

2. Point to the last sound in the word *hopped*.

3. Let us hear every letter as you pronounce the word *recognize*.

4. What two letters do you hear at the end of the word *must*?

Our ears *hear* the sounds (ang), not the word *an* in *thanks*. The word *is* is not heard in *island*; nor the word *on* in *iron*; nor *all* in *shall*; nor *but* in *butcher*; nor *of* in *often*; not *sure* in *pleasure*.

One can point to the last *letter*, but not the last *sound* in the word *hopped*. Letters are seen. Sounds are heard. Hence, one can hear every sound but not every letter in the word, *recognize*; and one hears two

sounds, not two letters at the end of the word, *must*.

The so-called "long a" sound is usually represented by the letters *a*, *ai*, *ay*, and by what is known as the "silent e" at the end of the word. In the following list, however, only nine of the words have the "long a" sound. Can you tell which ones do not have the sound of the "long a"?

lay	bay	stay	praise
layer	bare	stair	prairie
pray	pail	stare	birthday
prayer	pair	stain	Sunday

DIFFERENT SPELLINGS FOR THE SAME VOWEL SOUND

If the words in the English language were pronounced as they are spelled and spelled as they are pronounced, the teaching of phonics would be a simple matter indeed. But a language in which twenty-six letters stand for more than forty different sounds is certain to make special demands on a teacher's knowledge and skill.

Can you group the following words according to their vowel sounds without benefit of the dictionary? The problem is not one of pronunciation so much as that of discriminating between *sounds* and *letters*.

You will be interested in noting the number of different spellings for the same vowel sound in these words.

saw	plaid	port	chew	sieve
done	plague	sort	blue	good
been	court	toward	due	shoes
rough	cause	put	said	veins
earn	pour	purr	view	says
cough	err	bade	bear	heir
once	you	new	your	knew

DIFFERENT SOUNDS FOR THE SAME SPELLING

1. Take the following group of words. It is easy enough to pronounce each of the words as a whole and it is not much more difficult to pronounce only the first syllable in each of the words. But can you pro-

nounce only the vowel sound in the first syllable?

peril	parents	carriage	certainly
person	particles	carnival	cereal
perturb	paragraph	carrots	certificate
peruse	particular	carousal	cerebral

2. In the following list you will hear three different pronunciations for the letters *ed*. Can you tell what they are?

jumped	dreamed	seated	shouted
begged	buzzed	hopped	picked
weeded	missed	moved	crowded
loaded	watched	puffed	coaxed

How many words did you find that ended with the sound (t)? With the sound (d)? With the syllable (ed)?

3. In the next list of words you will hear four different pronunciations for the letters *ng*.

long	lounge	congratulate
longer	sing	congress
finger	singe	longitude

In which words did you hear the single sound (ng)? The blend (n) plus (g)? The blend (ng) plus (g)? The blend (n) plus (j)?

VOWELS AND CONSONANTS DEFINED

To say that the vowels are *a*, *e*, *i*, *o* and *u*; and sometimes *y* and *w* is putting the emphasis on letters, not sounds. Vowels are sounds produced *without interference* of the so-called speech organs. Consonants are enunciated *with obstruction* of the breath stream. The obstruction may be only partial as in the sounds (f), (l), (m), (n), (s), (v), (z), for example. Or it may be complete as in the plosives (p), (b), (t), (d), (k), (g).

All vowels are voiced. Consonants may be voiced or voiceless. While producing a voiced sound (b), (d), (g), (l), for example, the vibration of the vocal chords can be felt by placing a finger on the Adam's apple. The lack of vibration while

producing a voiceless sound (p), (t), (k), (s), for example, is equally obvious.

SINGLE SOUNDS AND BLENDS

Many teachers have difficulty in distinguishing between single sounds and the blends. A single sound is produced by one set of adjustments of the "speech organs"; a blend by two or more sets of adjustments. Thus, the letters *ng* as in *sing*; *wh* as in *white*; *sh* as in *ship*; *th* as in *bath* and *bathe*; *ck* as in *truck*; *ch* as in *chorus* stand for single sounds. The letters *st* as in *must*; *fr* as in *free*; *dw* as in *dwarf*; *j* as in *jump*; *g* as in *gem*; *x* as in *excite* and *exist*; *spl* as in *splash*; *str* as in *street*; *ch* as in *chin* stand for blends of two or more sounds.

By definition all the "long" vowel sounds are blends even when they are represented by single letters.

A UNIQUE SOUND IN OUR SPEECH

We have one sound in our language that has no letter which regularly represents it. In the following words it is represented by the letters *s*, *z*, and *ge*. Can you identify the sound as you pronounce the words? After that you may wish to observe how the sound is indicated in the dictionary.

rouge	treasure	prestige	usual
azure	seizure	garage	leisure

THE VOWELS IN UNACCENTED SYLLABLES

The influence of stress or the lack of it on the vowel sounds presents another interesting feature of our language.

1. The "long e" in the accented syllables in the words *being*, *recent*, *demon*, *Peter* is pronounced as a "short i" in the unaccented syllables in the words *because*, *receive*, *deceive*, and *peruse*.

2. The "long a" in the syllable *age* is pronounced as a "short i" in the unaccented syllables in *village*, *baggage*, *mesage*; similarly the "long a" in *ace* is pronounced as a "short i" in *palace*; necklace; the "long a" in *chaos* becomes a "short i" in *chaotic*.

3. The "long a" in *day* is pronounced as a "short i" in the unaccented syllable in the names of the days of the week; Sunday, Monday, Tuesday, etc.

4. The "long i" in *expire* becomes a "short i" in *expiration*; the "long i" in *pious* becomes a "short i" in *impious*.

5. The accented syllables *by*, *my*, and *try* are pronounced with the "short i" sound in the unaccented syllables in *baby*, *roomy*, and *country*.

One needs only to contemplate the difficulties that our language imposes on teachers unschooled in phonetics to realize how great is their need for instruction in the science. And the teachers themselves are the first to admit it!

The Place of Phonics in Basal Reading Instruction*

Josephine Tronsberg

"His sister can 'phonics' her way through any word, but Billy doesn't seem to know one sound from another" was the recent complaint of a mother whose son, aged ten years, was failing in reading.

The fact that many children are not reading as well as they should has caused educators, as well as parents, no little concern, and, in their efforts to improve reading instruction, their attention has been redirected towards the teaching of phonics as one of the ways in which a child can learn to attack new words independently.

A controversial issue for many years, the evidence from research in the past ten to fifteen years clearly indicates the value of teaching phonics. The issue is no longer whether phonics should be taught but rather "When shall instruction begin and how much? What techniques shall we use? How can we make phonics functional?"

A better understanding of child psychology and child development in recent years has led us to the realization that we must take into account the growth stages in a child's life and provide him with certain skills accordingly.

Research indicates that a child must have a mental age of at least seven years before he can use phonics successfully. Since the average child is only six years of age men-

tally upon school entrance, he will not be ready for phonics until he enters second grade. This does not mean, however, that all phonics should be avoided until his second year in school. Much of the general reading readiness program is a readiness for phonics. Training in auditory discrimination and visual-auditory discrimination are very important phases of the reading readiness and pre-primer programs. Many rhymes and jingles are used to sharpen auditory perception. At first, rhymes and jingles should be read to the child for enjoyment only. Later, his attention may be called to rhyming words and, finally, he is encouraged to make up rhymes and jingles.

READINESS FOR PHONICS

How can a teacher tell when a child has acquired the necessary readiness for phonics? He should be ready:

1. If he can recognize similarities and differences in words he hears.
2. If he can distinguish likenesses and differences in written words.
3. If he can differentiate between the configuration of written words.
4. If he has acquired the habit of reading for meanings in sentence, phrase, or word wholes.
5. If he has mastered a sight vocabulary large enough to give him a basis for generalizing about sounds.

* *The Reading Teacher*, VIII (October, 1954), 18-20, 38.

6. If he can use context clues effectively.
7. If he reads rhythmically.
8. If he can read to answer questions.
9. If he has formed the habit of reading silently before reading orally.
10. If he has developed a desire to read.
11. If he has a mental age of at least seven years.

Learning to sound out new words is not a simple skill. It is a complex process made up of several different abilities. After a child has acquired auditory and visual ability to differentiate between letter sounds, he must then learn to blend sounds before he can pronounce a word. Use of the word in context should always follow the analysis. Isolated word drills should not be used. Every time the word is seen in context, it gives another meaning association and, therefore, another clue for remembering it.

The value of phonics depends to a great extent upon how it is introduced and taught. The child's initial experience with phonics is very important. If he is introduced to phonics before he is ready or if the teacher tends to go too fast in presenting the techniques, he may develop a dislike for phonics.

In introducing phonics, attention should be directed first to initial consonants. This will aid in establishing good left to right reading habits and prevent reversals. Also, the first part of root words tends to give better clues to words than the last part. Often the clue obtained from the initial letter in addition to the context clue makes further analysis unnecessary.

After a child has mastered the left to right sequence, attention should be directed to final consonants and then to medial sounds.

Consonant sounds are introduced before the vowel sounds because they are easier to hear and to learn. While the sound of some consonants varies, all vowels have more than one sound and are affected by accent. Consonants used alone will provide clues to words but vowels will not. When

vowels are introduced, short vowels are presented before long vowels.

The sounds noted at the beginning of a word should not be sounded in isolation. Instead the child should be asked, "Like what word does it begin?" With the exception of the context clue, some children will be able to pronounce the word without further help. For the others, the teacher should choose a similar word which is in the child's sight vocabulary and that looks like the new word except for the final consonants and call the child's attention to the fact that the new word begins like a word he knows and rhymes with another word he knows. Thus, through substitution of consonants, the child recognizes the new word. Some will be slow in acquiring this skill, and the process may have to be repeated many times. They should recognize that parts of words which look alike also sound alike.

The teacher must have a thorough understanding of the basic sounds of the English language, otherwise she cannot do a good job of teaching phonics.

The trend in presenting the principles of phonetic analysis is to teach inductively rather than deductively. A child is given a number of words based on the fundamental principles of how sounds and their symbols function. These understandings develop as generalizations based on the child's experiences with words.

LIMITATIONS OF PHONICS

The teacher must be aware of the uses and limitations of phonics. They enable children to recognize many words by associating sounds with the proper letter symbols and then blending the sounds into a word. They are more often used in conjunction with other word recognition techniques, namely context clues, picture clues, sight vocabulary, configuration or structural analysis, than alone. No one technique can be effectively used to recognize all words. Also, continual use of any one

of these techniques would be very monotonous.

All children do not profit from a knowledge of phonics. Children with hearing defects cannot always discriminate between sounds. Others who acquire phonetic skills will use them ineffectually.

Practice in word analysis should include only those words which are in the child's hearing and speaking vocabulary. If the teacher overemphasizes phonics, it may handicap the beginning reader because his attention should be on meaning.

The vocabulary used in the basal reading program is the factor which determines not only what phonics skills shall be taught but at which grade level they should be introduced.

The practice of following the teacher's manual in the presentation of phonetic sounds is desirable because then the phonics are directly tied in with the reading and the skills are learned in proper sequence.

Teachers' manuals accompany the various basal reading programs, which, for the most part, present a simple, direct and

well-integrated approach to phonics. Teachers are not expected to follow the manuals slavishly. The manuals, written by experts, suggest all the possible activities which may help the child to read more efficiently. The teacher should select only those activities which fit in with the needs of her children.

Many teachers think that the teaching of phonics is the concern of the primary teachers only. They fail to take into consideration that, although these skills have been taught, they may not have been learned by all the children in these lower grades. Phonic instruction should be continued throughout the intermediate grades for those children who have not mastered all the skills and also as an aid in developing facility in using the dictionary and in syllabifying polysyllabic words.

Since they have so many uses, let's help more children to "phonics" their way through a word, as Billy's mother expresses it, but let's also think of phonics as a tool rather than a method of teaching children to read. It is a means rather than an end in itself.

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Functional Phonics

Sister Agnes Indres, S.S.M.

Phonics is the science of speech sounds. The forty-three sound units, or phonemes, used in general American speech are represented by the letters of the alphabet, and the knowledge of these sounds and of the symbols that stand for them is obtained through the study of phonics. Since "reading" is the understanding of ideas con-

veyed through letter symbols, what is the relationship of phonics to reading? Simply this: it is an aid to word recognition, a means to an end. The end is the ability to understand and experience what is read, but the means is so important that a child cannot become an independent reader until he can apply techniques which enable him

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veyed through letter symbols, what is the relationship of phonics to reading? Simply this: it is an aid to word recognition, a means to an end. The end is the ability to understand and experience what is read, but the means is so important that a child cannot become an independent reader until he can apply techniques which enable him

to look at a new word and pronounce it. The purpose of this essay is to present a program for a systematic training in phonetic analysis or phonics.

From the outset it is to be understood that the broad program of word recognition associated with meaningful reading is not limited to phonic procedures; it utilizes phonics as only one part of the total approach. Although phonetic analysis is a valuable technique to be employed in word recognition, it merely unlocks pronunciation. Therefore it must never be taught for itself; meaning must always accompany the pronunciation and form of the word.

Before explaining the development of this skill in each particular grade, it will be well to state a few general principles regarding the teaching of phonics. First, phonics should be taught systematically each day in a period distinctly apart from the basic reading lesson. In the primary grades each ability group should have its specific phonics lesson. The reading lesson for a given selection in the text should be followed at some other period in the day by the related phonics lesson covering the same unit of material. The order of teaching the different phonetic elements should fit the child's ability to learn and use those elements, and should follow closely the order of their appearance in his first grade reading matter. In the intermediate grades word recognition skills should be taught during spelling instruction, because, in the study of spelling, minute scrutiny of word parts is desirable. Always the teacher should be careful not to interrupt the thought-getting process of a story by word drill or by taking words apart.

The second principle is that the teaching of phonics requires individual pupil response. Individual accuracy in hearing the sounds and pronouncing the words is necessary for effective learning. The teacher therefore must attend to each individual within the group, and must not call for concert response.

The third and most important principle in the teaching of phonics is that words must be pronounced as units. Pupils should not break a word into separate sounds, for that distorts its natural pronunciation. For example, they should not see *plate* as a series of separate sounds—*p-l-a-t-e*—but rather see it as a definite total composed of *pl* and *ate*. If they concentrate their attention upon the vowel or vowels in the word and think the sound of the vowel in terms of its position, they can then pronounce the word as a whole. Paul McKee allows for an exception to this principle when he says, "In words which are easily confused because they differ only in one or two letters, *near the middle or near the end*, is detailed analysis to the point of 'letter phonics' necessary."

With these guiding principles before her, the teacher begins her instructions in phonetic analysis. She knows that a child must be trained how to make use of phonics as a means of word recognition, and this training should begin in the first grade. The preparatory skills taught in the pre-reading program consist of visual and auditory knowledge of the letters of the alphabet, auditory recognition of rhyming elements in words, likenesses and differences in the sounds of words, and visual discrimination of word and letter form.

This type of phonetic work is continued on a higher level in the pre-primer stage of reading, with the addition of auditory and visual recognition of consonants in initial, medial, and final positions in words. The child is trained to see, hear, and say words that 1) sound alike, 2) begin alike, and 3) end alike.

In the primer period, the short vowels and the principles governing their use are introduced and developed. From the study of short vowel charts pupils are led to formulate simple generalizations in their own words. They are guided to notice that 1) when *a* is the only vowel in a short word and comes at the beginning of the word, it usually has its short sound; 2)

when *a* is the only vowel in a short word and it comes between two consonants, it usually has a short sound.

During the remainder of the first grade, these skills are strengthened, common consonant blends are taught, and long vowels and the principles governing their use are introduced. Normally, first grade pupils do not master the long vowel principles; these are re-taught and frequently reviewed in the second grade. Awareness to them is a matter of training, and facility in applying them is a matter of practice. "Consistent repetition in making and applying phonetic generalizations to words provides a sound basis for word recognition and consequently for reading." Vowels and the principles regarding their use are taught immediately, thereby eliminating the need for teaching family phonograms. Generally the initial sound with one or more larger sound elements is sufficient to give the immediate pronunciation of a word in context.

In the pre-primer period the vocabulary is presented by means of a sight method. This is continued during the primer, but the power to recognize words independently has increased through the knowledge of the sounds and functions of the short vowels in monosyllabic words. As soon as the child's sight vocabulary includes two or three words which contain a certain phonetic element, such as the initial consonant *m*, that phonetic element can and should be taught. Immediately the child should practise using the element in conjunction with pictures and verbal context in order to identify strange words. It is a mistake to wait until the child has acquired a sight vocabulary of seventy words before beginning definite instruction in the independent identification of printed words. The program of word recognition on the first reader level maintains and provides practice for greater mastery of the skills begun in the pre-primer and primer periods. In addition, it presents the more advanced steps and procedures of word

analysis and the use of recognition clues. Less than half the basic words introduced at this level need to be taught by means of a sight-word technique.

In the second grade pupils are made familiar with the recognition and use of regular and irregular vowel digraphs, consonant digraphs, and diphthongs. There is frequent review of the vowel principles. William S. Gray summarizes these into five principles or generalizations:

1. If there is only one vowel letter in a word or accented syllable, that letter usually represents the short vowel sound unless it comes at the end of the word.
2. If there are two vowel letters together in a word or accented syllable, usually the first represents the long vowel sound, and the second is silent.
3. If there are only two vowel letters in a word or accented syllable, one of which is final *e*, usually the first represents the long sound, and the second is silent.
4. If the only vowel letter in a word or accented syllable is followed by the letter *r*, the sound of the vowel is usually controlled by the sound of *r*.
5. If the only vowel letter in a word or accented syllable is *a* followed by *l* or *w*, the *a* usually represents neither the long nor the short sound of *a*.

The major emphasis in this grade is upon the use of phonetic and structural analysis in word recognition and upon the coordination of various other word-recognition techniques with phonetic analysis. Pupils must be consistently trained to check the pronunciation of words with their use in context. If the words pronounced by the child are foreign to his experience, he will verbalize in reading, without interpreting the meaning of words. This is to be avoided—the use of phonics must always be meaningful and practical.

Phonics, important as it is, cannot be regarded as the sole means of word recognition. It is not always useful because of the nature of our language. In the second grade reading program, approximately

one-fourth of the new basic words must be taught by means of a sight-word technique. Frequently a combination of techniques is necessary to attack a strange word. The number of new words to be taught as sight words decreases as the phonics program is developed, and in the third grade only about a tenth of the new words presented in the reading lesson have to be taught as sight words.

By the time they reach the third grade, pupils are led to discover how certain basic principles govern the formation of many English words. They must see numerous examples, make comparisons and contrasts, and then formulate a simple generalization in their own words. The major emphasis is placed upon review of those particular elements essential to the development of syllabication skills. The foundation of these skills is laid in the first semester, while syllabication in its various stages is treated in detail in the second semester. New elements in the phonics program of the third grades are these: 1) ability to recognize word units in compound words; 2) ability to recognize both long and short vowel sounds within the same word; and 3) ability to recognize varying sounds of the vowels. Paul McKee recommends strongly placing emphasis upon teaching the child always to use any type of word analysis in conjunction with the use of the context for getting the pronunciation of a strange word.

By a strong phonetic program such as outlined here, the pupils in the primary grades are prepared and are given the opportunity to make use of phonics as a means of word analysis. Throughout the three grades, they are guided and made skillful in the intelligent use of this tool of word recognition.

In the intermediate grades, the pupils should be guided in the application of the principles of word attack which they learned in the primary grades. Exercises that recall, review, teach, or reteach specific phonetic skills which should be developed

in the middle grades are presented when needed. These phonetic skills are eight in number:

1. Auditory and visual recognition of consonants, consonant blends, and consonant digraphs (two consonants producing a single sound)
2. Auditory and visual recognition of regular and irregular vowel digraphs (double vowels)
3. Auditory and visual recognition of murmur diphthongs (vowels modified by *r*) and plain diphthongs (vowel blends)
4. Recognition and application of vowel principles
5. Discrimination of variant sounds of certain consonants and consonant-vowel combinations
6. Identification of silent letters in certain combinations
7. Recognition of representations for the same sound made by different letters in words
8. Use and meaning of diacritical marks as they apply to the vowel sounds.

Along with maintaining and extending the skills and abilities developed in the primary grades, the syllable as a unit of attack is the main factor stressed at the middle grade level. In analyzing words of more than one syllable, phonetic and structural analysis go together. Certain syllables are fairly stable units of sound, such as the prefixes *ex-*, *un-*, *dis-*, and the final syllables *-ble*, *-ing*, *-tion*, and *-ment*. The child must learn that in words of more than one syllable, when there is a single consonant between two vowels, the syllable is divided after the consonant if the first vowel is short, but it is divided before the consonant if the first vowel is long. When two consonants come between two vowels, the syllables are divided between the two consonants; final *-le*, however, forms a separate syllable with its preceding consonant. To blend syllables into a whole word, the pupil needs some knowledge of accent and of how accent affects vowel sounds. Two generalizations help to determine the accented syllable in a word: 1) prefixes, suf-

fixes, and inflectional endings are seldom accented; 2) the final syllable in a word ending in *-le* is usually unaccented. Consequently, in inflected or derived forms the accent will usually fall on the root word or a syllable within it. Vowel sounds in unaccented syllables are usually softened.

The use of the dictionary as an aid in unlocking words is also taught in these grades. A definite program for teaching dictionary skills should be followed. "When, at the middle-grade level, children learn to locate an entry in the dictionary, derive its pronunciation, and find the meaning appropriate to the word in a particular sentence, they call into play all their knowledge of how words must suit context, of word structure, of sounds and

their letter symbols." When particular groups of children need more concentrated drill they should receive it, but those who have grown in reading ability have diminished their need for sounding techniques. In the upper grades, formal phonetic instruction is given only in remedial reading classes.

Functional phonics has proved itself to be highly effective in developing independence in word attack. Used with the complete word-recognition program of context clues, word-form clues, structural analysis, and the dictionary, it will keep children progressing from level to level in reading. These techniques of word attack remain lifelong aids in developing confident, intelligent readers.

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Phonics Study and Word Analysis*

Paul Witty

Examination of a textbook such as *The Psychology and Pedagogy of Reading*, published in 1908, shows that phonetic instruction in American schools has long been a controversial issue. In other countries, too, this issue has been debated for a very long time. For example, Sister Mary Christina Sullivan notes that "in varying degrees the teaching of phonics has been associated with the teaching of primary reading during a period which goes back at least three centuries." The Port Royalists (1637-1661) adopted a system of phonics to replace the alphabet method of teaching reading. In 1783, Noah Webster advocated a type of

phonetic instruction by stressing the sounds as well as the names of the letters. From time to time, other phonetic approaches were recommended by American educators. In 1850, a special method, developed by E. Leigh, was introduced in the Boston Phonetic School.

Other phonetic methods appeared at later times. One of the best known was the Pollard's Synthetic Method, which was employed rather widely during the last decade of the 19th century.

Combinations of phonetic approaches were widely used throughout the first quarter of the 20th century when series of textbooks such as *The Gordon Readers*, *The Beacon Readers*, and *The Ward*

* *Elementary English*, May, 1953, pp. 296-305, and October, 1953, pp. 373-79.

Readers, which included varied phonetic emphases, were introduced in American schools.

About 1925, a reaction transpired against phonetic systems and other extreme emphases in teaching children to read. The attention of educators was directed to other more appropriate methods of instruction. Word methods which had, of course, appeared earlier, were advocated by some educators; others stressed the value of presenting larger units as the primary elements in perception. Some writers advocated an approach known as the analytic-synthetic method. According to one interpretation of this method, entire stories containing children's own accounts are first presented on experience charts. Words from these charts are selected for drills on flash-cards. After a basic stock of sight words is thus acquired, word analysis and phonetic study follow. There were of course, variations in the way this method was employed. In the earlier interpretations, the story was prescribed and not the result of children's experience. But, in all approaches, the story was first presented; then it was analyzed into its parts; and finally the parts were reassembled to make the story again.

Despite newer emphases, some educators continued to stress phonetic methods as the first step in teaching reading. In fact, several specific systems are now being employed in our schools. Reactions against separate systems and undue emphasis on pronunciation or on word analysis have been very strong. For example, in Chicago, this antagonism led to the formation of a non-oral approach to beginning reading instruction. Of course, every system has had its enthusiastic advocates.

In England, too, criticism of phonetic methods has been expressed again and again as the following statement by W. B. Inglis shows:

The problem of phonics in the early stages of reading is one of the storm centres in the controversies of contemporary educational

methods. Before discussing this subject it is perhaps necessary to say that the use of phonics in the teaching of reading is not so well entrenched in America as in Scotland, where, even today, there are few teachers who would embark on the teaching of reading without some recourse to this method. . . . One further general observation should be made; it should not be considered that the rival claims of phonic and nonphonic methods must be settled in favour of one of the claimants. In clinical practice both here and in the United States it has been found that among children who have failed to master the early stages of reading some make progress by appeal to the visual qualities of words, others learn rapidly under a regimen of phonics, while others profit most from a method, such as that described as the Fernald-Keller technique, which relies for word mastery on tracing and writing.

It is true that success has been obtained with different methods of reading instruction including various phonetic approaches. However, it is desirable for teachers to use the most defensible and efficient approach. Perhaps, experimental data will enable us to arrive at a tentative decision concerning this issue. Let us examine the results of experiments as they relate to the value of phonetic methods.

EXPERIMENTS DESIGNED TO REVEAL THE VALUE OF PHONICS

In 1938, A. I. Gates and D. H. Russell reported a study of the relative effectiveness of different methods of instruction. One group of children was trained by an "intrinsic" method—a method which stresses words as units of perception. This training was given by the use of various exercises such as the selection of correct words from groups similar in form or in pronunciation. Instead of instruction through such exercises, a second group of children was given drills in phonics. It was found that the first group made the greater gains in reading skills. Gates and Russell concluded that excessive amounts of phonics should be avoided. Other authorities, too, share this position and assert

that over-emphasis on phonics may not only block the acquisition of reading skills but also may lead to lack of interest in reading.

A somewhat different conclusion was reached by Donald C. Agnew who also made a comprehensive study of phonics. After testing two groups of third grade children who had received different amounts of training, he concluded that the following positive advantages accrued from the teaching of phonics:

- (a) increased independence in recognizing words previously learned
- (b) greater ability to 'unlock' new words
- (c) better pronunciation, and
- (d) improved oral reading

This writer asserted that there was no sacrifice of interest in reading among pupils who had received large amounts of phonic training; he also found that the training did not result in a tendency to "neglect" context clues.

Recent studies suggest that moderate amounts of training in phonics may prove helpful for pupils in the upper grades. J. Tiffin and M. McKinnis studied 155 pupils in grades five through eight. These children were given two silent reading tests and a third test requiring pronunciation of nonsense units. This third test was in large measure a test of ability to apply phonics. The scores on the pronunciation test correlated positively (+.40 to +.52) with the results of the tests of silent reading.

Several other workers have concluded that training in phonics is helpful in remedial work. Even at the college level, phonic training has been successfully employed. Yet the question of the amount and nature of phonic instruction to be employed in a developmental reading program is still unanswered by research.

Another aspect of research on phonics has yielded more reliable results. E. W. Dolch and M. Bloomster studied the relationship of phonic ability to mental ma-

turity. It was noteworthy that children of mental ages lower than seven years were not successful on the phonics test used in this study. These writers conclude that a higher degree of mental maturity is required to apply phonics principles than is required to learn sight words.

A. J. Harris, too, points out that "many of the difficulties which led to the reaction against phonics were the result not of phonics instruction as such, but of introducing phonic training at too early a stage in the average child's development. By placing phonics somewhat higher up in the curriculum, many of the possible dangers can be avoided."

Recently, other writers have considered "readiness" for phonics and have sought criteria to insure the child's ability to profit from phonetic training when it is introduced. Although research data are meager on this topic, it is rather generally agreed that certain developments and acquisitions are necessary before phonetic training should be undertaken. According to Harris, the child who is ready for such instruction will demonstrate these attainments:

1. He will be able to detect the difference between words that sound alike, such as *man* and *men*, or *had* and *hat*.
2. He will be able to detect whether two words begin with same sound.
3. He will be sensitive to rhymes; he will be able to pick out words that rhyme and will be able to supply words that rhyme with a given word.
4. He will be able to detect similarities and differences in word endings and middle vowels of words.
5. He will be able to blend the sounds of parts of a word and to recognize the word when it is presented to him sound by sound. . . .

Some of these acquisitions, Harris believes, can be cultivated during the pre-school period; for example, "speaking distinctly and correctly, listening to and reciting rhymes and poetry." However, other acquisitions might well be delayed until

children have acquired a basic stock of sight words.

Although several investigations disclose the need for phonic readiness, few research studies have been made to disclose the optimum time to introduce the various phonic elements. Several writers have made suggestions based on observation of practice; for example:

The building of word families is a popular activity in the first and second grades. The teacher usually waits until the children have learned two or three words that rhyme. She prints them in column form, calls attention to their similarity in sound and appearance, and underlines the common element in each word. Children are encouraged to suggest other words which are added to the family.

This practice, Harris points out, has limited value when words of more than one syllable are studied since the phonograms around which one-syllable words are built are not frequently found in longer words.

E. W. Dolch assembled 14,000 words from children's textbooks. He also studied the 19,000 words in *A Combined Word List*. More than 16,000 of the latter list were polysyllables. And more than 1000 different syllables were noted in the list of 14,000 words. The phonics commonly presented in the first two grades accounted for less than twelve per cent of the 1000 syllables. Most of these syllables began with consonants and were not to be mastered by applying principles stressed in the earlier work with monosyllables. Dolch indicates that every phonogram in a group compiled from the Gates' and the Washburne-Vogel lists begins with a vowel. Accordingly, he stresses the need for "letter phonics" beyond the primary grades, including emphases on syllables beginning with consonants.

Miles Tinker, after considering research studies, expressed a sensible warning regarding isolation of phonetic activities:

... the indications are that the teaching of phonetics should begin only when the child

has phonetic readiness. This stage is apparently reached when the child has acquired the visual and auditory discrimination adequate for differentiation between letter sounds, when the child has acquired a considerable stock of sight words, when he has attained a mental age of approximately seven years, and when he is making some progress in formal reading situations. Formal training in phonetics, therefore, should be started only after the child has progressed well along in first grade work. Nevertheless, some informal training such as with initial sounds, may profitably be given soon after the beginning of formal reading. Such training should always be intrinsic to the reading situation. Teaching phonetics by elaborate isolated word drills cannot be justified. Analysis of an isolated word should always be followed by its use in the context of actual reading. In other terms, word analysis activities should not be permitted to become isolated activities.

Despite experimental evidence and recommendations of experts, extreme emphasis on phonics, often as an isolated activity, continues to be found in many schools. In 1941, W. A. Brownell reported the results of the use of phonics by 627 primary grade teachers in twenty-six different school systems. Brownell drew these conclusions:

1. The trend is to give more emphasis to phonics in grades two and three than in grade one.
2. There are great differences in the amount of phonics taught in different school systems as well as differences within classrooms of the same system.
3. There is no relation between the teaching of phonics and the age of the teacher, years of experience, or length of time since the teacher's last course in reading methods.
4. Rural teachers tend to emphasize phonics more than do city teachers.

The recent publication of a number of systems of phonetics suggests a renewal of interest in this phase of reading instruction. Several of these systems are designed to present phonetic instruction as a more or less isolated activity.

WHEN SHALL VARIOUS PHONETIC ELEMENTS BE INTRODUCED?

There are many plans suggested for the introduction of phonic elements. The fol-

lowing suggestions made by Harris are illustrative of these efforts. In this presentation, goals are conveniently grouped under three headings according to reading

A Planned Sequence of Word Recognition Goals (From A. J. Harris)

Reader Level	Sight Recognition	Visual and Auditory Readiness	Word Analysis and Phonics
Pre-Primer	50-75 words	Matches, objects, pictures, letters, words, phrases, sentences. Notes similarity in the sounds of rhyming words.	Recognizes same word beginning with capital or lower-case letter Recognizes plural made by adding <i>s</i> .
Primer	125-200 new words	Participates in composing simple rhymes. Supplies missing word in an incomplete rhyme. Notes sound of words that begin alike.	Uses context clues and picture clues in recognizing words. Recognizes known parts in compound words (<i>into, something</i>). Recognizes and constructs variants ending in <i>s, es, d, ed, ing</i> .
First Reader	150-300 words	Continued use of rhymes. Listens to similarities and differences in beginnings and ending of words.	Continued use of context, picture clues, words within words, and endings. Learns names of all letters of alphabet. Use of initial consonant sounds, including consonant digraphs <i>ch, sh, th, wh</i> (omitting <i>v, x, z</i>).
Second Reader	400-750 new words	Listens to and compares words with different vowel sounds: <i>bill-bell, man-men, can-cane</i> . Listens to and compares words starting with single and double consonants: <i>fight-fright, seal-steal, snake-snake</i> , etc.	Recognizes and uses sounds of initial and final consonants, combining with context clues. Builds new words by changing the consonants in known words. Learns the more common two-letter consonant blends: <i>tr, fl, st, sl, fr</i> , etc. Learns the short and long sounds of the vowels: <i>a, e, i, o, u, y</i> . Learns the rule of final silent <i>e</i> . Learns the common vowel digraphs, <i>ai, ay, ea, oa, ee, oo</i> .
Third Reader	600-1000 new words	Listens to pronunciation of words containing new phonic elements.	Learns less common two-consonant blends such as <i>pl, cr, qu, gn, kn</i> , etc., and some three consonant blends: <i>str, spr, tch, sch</i> . Learns vowel diphthongs such as <i>oi, oy, ow, ei, ou</i> . Learns sounds of vowels when followed by <i>l, r, or w</i> . Learns endings, <i>ion</i> and <i>sion</i> . Recognizes stems in words ending in <i>y, ly, er, est, ful, able</i> , etc. Builds new words by adding suffixes. Recognizes contractions such as <i>don't, haven't, couldn't</i> , etc. Learns to divide two-syllable and three-syllable words into syllables.

levels extending from the pre-primer to the third reader.

William S. Gray, also sets forth the following levels instead of grade standards for phonic training:

At Level One, in general, the child applies his knowledge of single consonants in attacking new words, and he applies his knowledge of simple inflectional endings, *-s*, *-s's*, *-ed*, *-ing*. At this level he should be able to attack a word form which is like a known word except for a single initial or final consonant letter or a known structural element. At Level Two, he applies his knowledge of two-letter consonant symbols, that is, of consonant blends and the special symbols *wh*, *th*, *ch*, *sh*, and *ng*. He also identifies root words in inflected forms in which the final consonant is doubled before the ending.

At Level Three, he applies his knowledge of vowel elements to attack any one-syllable word in which the vowel sound may be determined by associating the appropriate sound (or sounds) with the symbols *ow*, *ou*, *oi*, *oy*, or *oo*, or by applying general principles that aid in determining vowel sounds. He is able to attack an inflected form in a known root in which the final *y* is changed to *i*, or the final *e* is dropped before the ending.

At Level Four the child applies both structural and phonetic analysis to words of more than one syllable. In doing so, he applies his knowledge of general principles of syllabication and of principles that aid in determining vowel sounds, as well as his knowledge of accent. He also readily identifies such simple prefixes and suffixes as *re-*, *dis-*, *im-*, *-ful*, *-ish*, *-ness*, *-ly*, *-y*, and attacks words formed by adding these (or inflectional endings) to unknown root words of one or two syllables.

At the first four application levels, the child uses structural and phonetic analysis to derive the sound of a printed word. These methods of attack are effective only if the spoken counterpart and meaning of the new printed word are familiar to him.

At Level Five, for the first time he attacks words which are unfamiliar to him in sound or in meaning as well as in form. At this last level he uses the dictionary to derive both the sounds and the meaning of words.

Donald D. Durrell after noting the different emphases in teaching reading over the previous ten years, offered the following suggestions:

A complete program would include ear training to give the child skill in attending to the auditory elements of words, visual training for recognition of the visual elements that accompany word sounds and, above all, provision for independent use of the skills. . . . One of the greatest weaknesses in the old family system of phonics was that, while the child was able to sound each word element, he was unable to apply his skill successfully in solving new words he encountered. After any exercise designed to teach the child the recognition of word elements, lessons should be provided for applying the skill in the independent solution of new words. . . . For practice in word analysis no word should be included unless it is already in the child's hearing and speaking vocabulary. . . .

It is desirable to delay instruction in word analysis until the child has acquired a sight vocabulary of seventy-five to one hundred words. . . .

However, there are several background skills of value to the child in word recognition which may be taught even before the child enters school. These include the names of letters, ear-training exercises, and some simple writing.

There is a wide variation too in phonic practices recommended in different courses of study and followed in different localities. One may note these variations in the suggested programs of phonic instruction for schools in Chicago and in Minneapolis. Following are the programs advocated for the kindergarten and grades one to three in Chicago and for two of the four periods of phonic instruction in Minneapolis. In the suggested program for the language arts in Chicago, one area is designated as "Word Study, Phonics and Spelling." For the kindergarten only "auditory discrimination" and "training in sound by use of pictures of familiar objects" are listed.

Areas of Learning (Chicago Public Schools)

For Grade One

Ear Training

1. Rhymes for ear training
2. Words that rhyme
3. Words beginning with the same letter
4. Introduction of individual consonant sounds

Visual Training

1. On board, teacher writes words beginning with *s, f, b, p*, etc.
2. Digraphs: *sh, ch*.

Basic list of spelling words

For Grade Two

Ear Training

1. Rhymes from books
2. Pupils' rhymes of words
3. Pupils' listening for beginning and ending sounds

Visual Training

1. Review of initial consonants.
2. Presentation of initial consonant blends and digraphs: *fr-gr-st-tr-br-ch-sh*.
3. Syllabication: prefixes and suffixes.
4. Structural analysis. Word endings: *-ing, -y, -ly, -er, -est*.
5. Developmental skill in blending.
6. Long and short vowels: *a, e, i, o, u*.

Basic list of spelling words

For Grade Three

Ear Training

1. Review of consonants, blends and digraphs.
2. Presentation of vowel combinations.

Visual Training

1. Practice in seeing and recognizing consonants, blends, digraphs and vowels.
2. Initial consonants, *y*, and blends *tw, qu*.
3. Teaching of hard and soft *g*.
4. Review of long and short vowels.
5. Review of final *e* in one syllable words.
6. Silent letters—*wr, kn*.
7. Vowels modified by *r*.
8. Vowel digraphs and diphthongs.
9. Three-letter blends: *spr, str, scr, squ*.
10. Structural analysis.

Basic list of spelling words

In Minneapolis, the *Guide to Teaching Reading in the Elementary (public) School* outlines objectives in word analysis and phonics for "periods" in a "Developmental Reading Program."

- I The Pre-Reading Period. "This occupies the school years of the kindergarten and first grade for all children." Develop ability to notice likenesses and differences in word sounds and forms in pictures, games such as Lotto, puzzles, rhyming words, letter and word sounds. Notice words or names printed on the board.

- II Period of Introducing Children to Reading. "This takes place during the first grade for most children. For some children this period begins late in first grade or in second grade."

To develop accurate recognition and pronunciation

Note configuration of a word:
Look for striking characteristics
Look for two letters alike
Look for tall letters

Make use of word analysis
Give ear training to aid in recognition of similarity in initial and final sounds.

To develop beginnings of word analysis
Give practice in recognizing and using the following consonants when occurring initially in words: *h, b, p, s, m, d, t, w, g, c, j, f*.

Identify the similarity in sound and appearance of sight words which are alike except for initial consonants.

Recognize "small words" in longer ones.

Recognize words formed by adding "s" to sight words.

Later word analysis:

Recognize a new word which is like a known word except for initial sound
Give practice in recognizing and using the following double consonants when occurring initially in words met in reading situations: *th, wh, sh, ch*.

Recognize the sound and appearance of the following consonants when occurring in final position in words met in reading situations: *l, t, m, n, d, s*.

Recognize the sound and appearance of word variants met in reading situations: *er, ed, ing, est*.

Apply the recognition of "small words" in longer ones in attacking unfamiliar sounds.

Recognize vowel sounds met in reading situations.

III Period of Growth in Independence in Reading. "For the child of normal reading ability this period occupies grades 2 and 3. For some children in the later grades this may still be the level of reading development. There may be children in first grade whose reading ability has reached this higher level. Teachers of all grades will be concerned with the curriculum of this period. This period should develop without break or gap from the preceding period into the period which follows."

For Period III, similarly detailed suggestions are given to help the child develop independence in word recognition through structural analysis and through phonetic analysis.

Some limitations of phonetic approaches are recognized by supervisors and administrators who are working with children.

This warning is found in a publication by the New Mexico State Department of Education, 1942:

There is no device nor supplementary practice which will give the training in word meaning and interpretation equal to that of experience with large quantities of reading materials. . . .

Moreover, phonics should not be introduced until children are ready.

Phonics should be introduced when needed. . . . The child should have a reading vocabulary of twenty-five to fifty sight words . . . phonic training should begin to note points of similarities and differences in the sight words which they know.

In the Intermediate Manual for grades 4, 5, 6 of the Cincinnati Public Schools, 1951, this statement is found:

Versatility of attack should mark all efforts of pupils in unlocking the pronunciation and meaning of new words. In so far as possible help in word attack should be given as the need arises while the pupils read.

This manual then suggests that the teachers' guides accompanying basal texts be followed "if persistent repetition is needed to attain certain (phonetic) techniques."

And these sensible suggestions are then made:

Context analysis is the best single way of identifying new words. Since phonetic skill is not an end in itself, pupils should not continue to analyze known words phonetically.

In an Arizona state course of study the following statement appears:

Phonics is only one tool to use in attacking strange words . . . other tools such as analogy are important and need to be taught. Phonics are merely a tool and not a method of teaching children to read.

Drill must not be emphasized to the point that the child fails to read for meaning.

Curious drills are suggested in some manuals including these sentences to help pupils in "individual word attack training":

The dear little dog drove the deer down the ditch to the door of the dug-out. The door of the dug-out was down in the dirt. The dear little dog could not drive the deer to the door of the dug-out.

The above drill is suggested in the New Mexico course of study which includes also this admonition:

... the primary objective is not to drill a small number of phonograms into pupils' heads, but to develop a general eye-ear sensitivity and a few general ways of reading printed words.

ATTITUDES TOWARD PHONICS AND PHONETIC METHODS

One of the most extreme positions is that of Leonard Bloomfield who denounces a meaningful or whole-word approach and suggests instead a return to an earlier method of phonetic instruction. According to his system, each letter must show only one phonetic value. The first reading material includes "two-letter and three-letter words in which the letters have the sound values assigned at the outset."

Nonsense syllables such as *bam*, *bap*, *mim*, *mip* should be included. Words unfamiliar to the child, such as perhaps *van*, *vat*, should not be avoided; they should be treated as nonsense syllables or, if there is time, accompanied by a very brief explanation of their meaning. Short sentences of the type *Nat had a bat* can be used at this stage.

Such a mechanical approach is contrary to the recommendations of most authorities in reading instruction. Moreover, such an artificial approach becomes necessarily an activity isolated from more meaningful activities in reading and learning. Several other isolated phonetic approaches have also been recommended and employed since World War II. One authority considers this tendency a threat to progress in reading instruction:

The recent trend toward reinstating the purely mechanical word perception programs of the old alphabetic or phonic methods is viewed with alarm by educators who are interested in promoting growth in reading power. Skill in phonetic analysis is essential for independence in identifying new printed words, but this skill should be based on fundamental understandings of how sounds and their letter symbols function in our language; and these understandings should develop as generalizations based on the child's experience with words—words which he learns visually as meaningful wholes, rather than mechanically as a series of letter sounds. And finally the use of phonetic understandings and skills should be geared into the total process of word perception.

This authority, William S. Gray, then recommends a modern balanced program in reading:

Fortunately, much study has been given recently to developing valid techniques for word perception that are in line with modern child psychology and modern ideas of reading instruction. Within the past few years there has been a growing acceptance of the fact that no one method of word perception is adequate. The child needs to know how to use various methods if he is to achieve independence in reading in a well-balanced reading program of today—

1. Children acquire a basic stock of sight words that they learn as wholes.
2. They also develop skills that enable them to attack new words. These skills include the use of context clues, as well as word-form clues and word analysis, both structural and phonetic.

Among the educators who have advocated a moderate course in using phonetic systems is A. I. Gates. He points out that although phonetic analysis is useful when pupils encounter unfamiliar phonetic words, it has serious limitations when applied to longer words. The difficulty in analyzing words such as *enough*, *automobile*, and *moving* illustrates the problem of applying phonetic principles to a language made up chiefly of unphonetic polysyllabic words. But even the monosyllabic

words in American-English are often unphonetic; for example, the *ai* combination is pronounced differently in each of the following words: *pair*, *aim*, *said*, *aisle*, and *plait*. And the *ea* combination has a different sound in each of the following words: *each*, *hear*, and *tear*. Thus one sees that American-English is neither a monosyllabic language, nor a highly phonetic one. It is not surprising, therefore, that phonetic systems, slavishly followed, leave the pupil confused and bewildered concerning the pronunciation of many words. Moreover, they may make the pupil "not only 'word-form conscious' at the expense of interest in meanings, but even worse, word-detail conscious. . . . Reading and word-study become slow, laborious, mechanical performances. Serious deficiencies in word perception and reading ability are not infrequent results."

Gates recommends, therefore, that instruction be given to enable pupils "to exercise good judgment in using the technique best suited to an individual word." The best method therefore is

to attempt first to recognize the word as a whole. If a quick glance at the whole configuration does not lead to recognition, the next step is to try to recognize the words in terms of large components. For example, if the child fails to recognize *without* as a whole, he should look for the big features, and in doing so he may discover that he knows both of the component words. If he only knows *with*, but is unfamiliar with *out*, he may be able to solve it since knowing the first part gives him a very good start. He is especially likely to solve the word if it is in helpful context. Failing to recognize either of the words he may search for small details.

There are other instances in which intermediate steps between the recognition of the word as a whole and the sound of individual letters are not helpful. There are still others in which the sounding of individual letters is a formidable and complicated task, for example in the case of such a word as *moving*. English words are so unphonetic that a pupil must acquire a variety of ap-

proaches and develop flexibility in dealing with individual word forms.

Paul McKee believes that in initiating reading instruction, the teacher should depend upon the sight method. The child should be directed to attend to the form of a familiar word as the word is pronounced by the teacher. Attending to the form of a familiar word whose meaning is known and at the same time hearing the word pronounced leads the child to associate meaning with the correct pronunciation of a word in various settings.

Soon the teacher should begin to stress phonetic and structural elements—

anyone of certain phonetic elements which need to be taught, such as a single consonant (*t*), a speech consonant (*ch*), or a consonant blend (*gr*) in the initial position in a word, will be taught as soon as the list of words already learned by sight includes two or three words which begin with that phonetic element and which, therefore can be used for introducing the element. Likewise, any one of certain structural elements which need to be taught—a suffix such as *ed*, *es*, *ing* added to a base word to make a variant—will be taught as soon as the list of words already learned by sight includes two or three words which contain that element and which therefore can be used for introducing the element.

The child should be taught to employ verbal context, pictures, phonetic analysis and structural analysis as means of identifying unfamiliar words. After these tools are mastered, they should be used as they are needed in "conjunction with one another." Control of vocabulary is emphasized as essential and the warning is given to keep the child from developing the idea that the act of identifying words is reading.

Somewhat different from the approaches recommended by Durrell and by McKee is that suggested by Guy L. Bond and Eva B. Wagner. In many ways, their point of view is similar to that of Gates:

. . . the teacher needs a diversification of methods in which she can employ the pro-

gram of instruction that is suitable to the problem which she has at hand at a specific time. However, it is found most effective to have the instruction fundamentally that of purposeful topical reading. At the same time the other methods are used as teaching techniques to solve the problem and to avoid the dangers that would be inherent if the purposeful method alone were used.

David H. Russell, too, treats phonetic approaches in association with other methods and indicates seven ways by which new or partly familiar words may be recognized:

1. By the general pattern, or configuration of the word
2. By special characteristics in the appearance of the word
3. By similarity to known words
4. By recognition of familiar parts in longer words
5. By use of picture clues
6. By use of context clues
7. By phonetic and structural analysis of the word

The successful reader is one who can combine several of these approaches in attacking unfamiliar words.

It is important that the teacher be alert to the application of these four methods (word perception abilities) in terms of the words a group of children already recognizes and in terms of what sort of perception will work in the particular case of the new word. Always the teacher will direct attention from any mechanical aspects of recognition over into the meaning of the word which the children were originally seeking.

A helpful discussion of the problem of phonetic instruction is found in a bulletin prepared by Alvina T. Burrows who concludes:

It has been demonstrated that intensive training can produce improvement in word recognition and pronunciation. But the transfer of this particular training to the inferring of meaning, the assimilation of thought, is another matter. Apparently, only *if* the phonics teaching is part and parcel of the thought-

getting activity, only *if* the phonetic analysis is an immediate means to an immediate end, is it helpful to children in the intricate kind of growth demanded of their meager powers of generalization.

Within these boundaries then, phonetic experience seems to offer assistance to children who are learning to read: The children must have attained a minimum mental age of 7 years. The reading program must be soundly based on the children's interests and upon their inherent rights to be different. Phonetic instruction must be immediately and intimately related to the getting of ideas and subservient to content. Phonetic power, reading comprehension, and mental age are closely interrelated and conditioned upon total growth of the child.

PHONETIC SYSTEMS

Although educators today vary in their attitude toward the desirability of systems of phonetic study, many workbooks are being published which utilize a variety of approaches. These books are designed either to accompany a basal set of readers or to supplement an established system of reading, or to aid the teacher in her work with children who have reading difficulties.

An examination of a group of independent workbooks prepared to supplement the regular program of reading instruction suggests that the trend in teaching phonics is toward an auditory-visual approach. This approach is not entirely new since many teachers have used it in the past. A somewhat different procedure, that developed by Anna D. Cordts, also continues to be rather widely followed. According to this method the word is always presented as a whole.

Consequently the child does not work with material that has one aspect in his phonics and another in his reading. He responds to whole words in both learning situations, in phonics as well as in reading.

And the child is taught to recognize blends "as they naturally occur in words." For example, he sees *sa* in *sat*; he does not first

form this blend *s-a* into *sa*. He is encouraged to pronounce the beginning of the word and then the whole word, *sa* and then *sat*, rather than sounding each element, *s-a-t*.

Another older system, still being followed in some schools, was developed by Marjorie Hardy. Although the author recognizes the dual approach—the “phonics of oral reading and the phonics of silent reading,” she is more concerned with the phonics of silent reading. *My Workbook in Phonics, Part One*, is devoted largely to the beginning phonetic elements, while *My Workbook in Phonics, Part Two* presents the long and short vowels. The words in both books are shown in a “contextual manner and always as entire words, undivided.”

After 1940 an awakening of interest in phonics occurred. Perhaps the disclosures after World War II of the high frequency of poor reading in many schools caused teachers to turn to phonics. This interest led to the publication of several programs and sets of workbooks. The phonic approaches advocated by Donald Durrell and his associates were widely used. This approach was described in *Building Word Power* and exemplified in two accompanying workbooks, *We Meet New Friends* and *Friends of Ours* designed to provide drills and experiences in phonic study, to offer “fundamental instruction in visual perception and in auditory perception of word elements.” These books are not intended to take the place of a “complete system of teaching reading.” Their function is to “supply specific instructional material to increase auditory and visual perception.”

The authors point out that these exercises differ from the phonic exercises of “older reading systems.” This plan provides practice in auditory discrimination by utilizing the “sound elements in the child’s spoken vocabulary and gradually ties these sounds to the visual form of the word.” The “older methods” translated

“visual forms into speech elements without any assurance that the child had heard the sound elements in his speech.” “Words are used that are already in the child’s speaking vocabulary and attention to meaning is kept high.”

The ear training “begins with listening for initial consonants and proceeds through listening for initial blends, rhyming words and final consonants.” The visual exercises “start with simple matching of letters and continue up through the more difficult stages of noting differences in words which are very like in appearance.”

Another rather popular program also provides auditory training and visual training. Mary Meighen, Marjorie Pratt and Mabel Halvorsen have prepared a series of workbooks entitled *Phonics We Use*. Initial consonants are presented first, then final and medial sounds. In later books practice is given in building words with emphasis on suffixes and prefixes.

In a set of workbooks known as *Phonic Skilltexts*, “an integrated approach” is employed.

All training in word recognition is given in meaningful contextual settings rather than by a program of isolated drill exercises. . . . The training in word recognition skills includes speech, visual, auditory, and kinesthetic activities because these perceptual skills are interrelated.

Consonants and consonant blends are presented first, with context clues to aid in learning new words. Then the child is taught some of the more common phonograms such as *at*, *in*, and *ot*. Next follows a study of vowel combinations and of the long and short vowels. Simple rules are given for long and short vowels. The rules, the authors believe, are more effective aids than is the memorization of “hundreds of phonograms” needed in dealing with the “numerous monosyllabic words containing long and short vowels. Word analysis and word building skills are also taught.” Later in the program syllabication and dictionary techniques are introduced.

Two phonics workbooks published by Beckley-Cardy for grades one and two are entitled *Phonic Fun*. These books present "phonics elements with word frequencies as contained in basic readers." Another Beckley-Cardy publication has been prepared by Ethel Savage, *Building Words, a New Phonics Workbook*. This book "provides material for both ear and eye training of basic sounds. The child has an opportunity as he progresses to become so familiar with the sounds that make up the beginning, middle, and ending of a word, that word-guessing is reduced to a minimum."

Clarence R. Stone, too, uses the auditory and visual approach in a series of workbooks entitled *Eye and Ear Fun*.

The child should not form the habit of separate soundings or analytical pronunciation. After the child has adequate phonetic knowledge for word analysis, he should be trained to (1) focus upon the initial letter, letter combination, or syllable, getting in mind the pronunciation; (2) to look forward to see the remaining part of the word; (3) to return the eyes to the beginning part of the word, viewing it as a whole. . . In case the child does not succeed, it may be advisable to ask him to sound or pronounce the beginning of the word—the initial consonant, consonant combination, or syllable. Separate pronunciation of the parts of a one-syllable word, a common procedure in traditional phonetic systems, is a too-long-drawn-out process. Too often the child tears the word apart orally and fails in the blending process required for recognition as a whole.

Another method which carries in its name the emphasis on the auditory-visual approach to reading is the Phonovisual Method developed by Lucile Schoolfield and Josephine B. Timberlake. The materials consist of two large charts in color, one for identification of consonants, the other for identification of vowels. A manual accompanies the charts.

Another set of workbooks was published in 1951. The authors believe that "specific instruction in phonics should be intro-

duced early in the first grade. Children who have reading readiness are also ready to use phonics as a reading tool." It is recommended that the children be first taught a small vocabulary of sight words. They are then ready for exercises on the basic sounds. *The Wordland Books* are "designed to help the children master the phonetic elements . . . quickly, largely by their own efforts with a minimum amount of direction from the teacher."

A decidedly different approach is found in a program of word study developed by Nadine Fillmore, *Steps to Mastery of Words*. Although this plan was developed to teach spelling, it is recommended as an aid in teaching phonics and word analysis. It is organized

to give the pupil mastery over words during the spelling period so he can read with pleasure and comprehension during the reading period.

The materials include two "sound sticks" and a "Read-More, Spell-More Sound Chart."

On the black sound stick are consonants and blends which are used for the beginnings of words. On the red sound stick are the consonants which are used for the endings of words. On the sound chart are vowels and the combinations of vowels which are used as the foundation letters in making words.

The teacher pronounces a word and the pupil forms the word by manipulating the black and red sticks on the sound chart. Ten recorded lessons are available to accompany the books. These records demonstrate the teaching of consonants, vowels, key words, blends and syllabication.

Another unique method is that designed by Julie Hay and Charles E. Wingo, *Reading With Phonics*. In this book the authors state that:

The child must be taught that there is *one* and only *one* place to attack a word and that is the initial blend.

The teacher is cautioned not to direct the pupil's attention to the middle or to the

end of the word but always to the initial sound.

In this system, vowels are presented first and then single consonants. Next follow the blending of one initial consonant with vowels, blending two initial consonants with vowels, and the study of digraphs, diphthongs, and silent letters.

In the text two colors of print are used to direct the child's attention to important letters. The following is an example of this emphasis. The teacher is instructed to:

Tell the child that the red *a* in *read* is a frog and that he must leap over it sounding the word as *red*.

Later in the book the blending of three initial consonants is presented. At this point too, the endings *-tion*, *-sion*, and *-ed* are taught.

For some time, teachers have introduced games and contests to motivate phonetic instruction. Several writers have stressed the value of word-building exercises in which word wheels are utilized. The use of games with cards is advocated by Edward W. Dolch. For the primary grades Dolch has prepared the *Picture Readiness Game*, the *Picture Word Cards*, the *Basic Sight Cards*, the *Sight Phrase Cards*, and the *Group Word Teaching Game*. For the fourth grade he has added *Basic Sight Vocabulary Cards*, *Consonant Lotto Game*, *Vowel Lotto Game*, *Group Sounding Game*, and *Sight Syllable Solitaire*. Although these materials are designed for the primary or for the intermediate grades, they can be used in any grade where the individual needs of the pupils will be met by them. For use by the primary grade teacher, the Follett Publishing Company has recently designed a set of puzzles to teach phonics.

Donald Durrell, too, has described word games and devices for aiding children to develop skills in word recognition. Among his suggestions are *Wordo*, an adaptation of *Bingo*; directions for making out of oak tag a tachistoscope; and an adaptation of the paper tachistoscope in the shape of a football.

Albert J. Harris also suggested several games to "add variety and interest to a program of training in word recognition." Among the games recommended are: *Lucky Wheel*, *Phonic Strips*, *Darts*, *Word-O*, *Anagrams*, *Spin the Pointer*, *Fishing*, *Racing*, *Word Hospital*, and *This to That*.

Harris has described these games and has given instructions how to make some of them in *How To Increase Reading Ability*.

CONCLUDING STATEMENT

In this paper the writer has attempted to present an overview of research concerning phonic instruction. He has set forth, too, the positions of several leaders on the place and value of phonic instruction. And he has described briefly representative systems of instruction in phonics.

From this discussion one may conclude that the nature and amount of phonic instruction to be given is still a debatable question. Adherents to any one of a number of positions may find a justification for their views in published sources—from the devotees of the doctrine of "no phonics" to the advocates of a highly artificial approach. Despite the controversy, certain facts do appear clear. There is certainly a phonic readiness which should be ascertained before instruction is offered. Phonetic study should begin with known words and an auditory-visual emphasis should be employed.

First Grade Phonics in Texas Schools*

Thelma Shaw Atkins

The schools of Texas use five series of textbooks for the teaching of reading in first grade. Each school chooses one of the five for a basic text. The authors of the manuals of these books are Emmett A. Betts, William S. Gray, Paul McKee, and David H. Russell. They, like most of the writers of the last two decades upon the technique of teaching reading, agree upon a few rather clearcut principles for phonics in first grade. These are some of the points of agreement:

1. In the first grade the initial study of sounds is confined to those that the child recognizes around him rather than to a study of the sounds represented by letters as symbols.

2. No study of the sounds of letters, as such, is made during the first few months of the child's school life.

3. Thought units, words and phrases, are the child's introduction to reading.

4. Reading is taught and practiced as a process of thought getting, using a stockpile of sight words, until the concept of reading as a gaining of ideas is established. Sight words are words that are recognized at sight and have been taught by association with telling, action, and pictures.

5. No device for giving independence in identifying new words is taught until the child has skill in getting ideas from these sight words.

* *Elementary English*, XXX (May, 1953), 204-5.

6. Phonics is only one of many devices taught to give independence in recalling words once seen or in identifying strange words. Pictures, context, structural analysis, recognition of a familiar part of a word, configuration, similarity to known words, all play a part in word identification along with phonetic devices.

A recent survey was made in the San Angelo, Texas public school system concerning the use of phonetic practices in first grades. A personal interview with each of the thirty-six teachers of first grades in the school system was used to determine the actual practices in phonetic teaching in use during the school year 1951-1952.

The findings of the survey were compared with the recommendations of the manuals of the adopted texts. All of the teachers were using as basal texts *The Curriculum Foundation Series* by William S. Gray and others.

The study of the survey reveals that the San Angelo first grade teachers presented more phonics than the manuals of the adopted texts recommend in the nine principal phonetic practices suggested by the manuals for first grade work: (1) rhymes, (2) the sound of initial consonants, (3) the sound of final consonants, (4) introducing new words by the substitution of one initial consonant sound for another, (5) consonant digraph sounds, (6) the addition of *s* to root words, (7) the addition of *ed* to root words, (8) the

addition of *ing* to root words, and (9) compound words.

Going beyond the recommendations of the manuals in phonetic teaching, some teachers presented sounds of (1) vowels, (2) consonant blends, (3) consonant-vowel blends, (4) vowel consonant blends, (5) silent letters, and (6) some rules about phonics.

San Angelo teachers presented phonics more days than the manuals suggest, and they began some phonetic practices earlier in the school year than provided for by the manuals. The latter included teaching (1) the sound and appearance of letters in initial position in words, (2) the final consonant sounds of words, the addition of (3) *ed* and (4) *ing* to root words, and (5) compound words.

They taught (1) rhymes, (2) consonant digraph sounds, (3) new words by the substitution of one initial consonant sound for another, and (4) the addition of *s* to root words at the same time that the manuals recommend.

The over-all view shows that San Angelo's first grade children of 1951-1952 were taught more phonics than the man-

uals of the adopted texts recommend, and many phonetic practices earlier in the school year than recommended by the manuals.

The study also reveals that San Angelo children began receiving phonetic training as early as they could be expected to profit from it, judged by research upon the subject. The burden of the phonetic teaching came in the latter half of the first grade year. At this same period about half of the children can be expected to have reached a mental age of seven years, which has been found to be the lowest mental age at which a child can be expected to use phonics.

Texas schools have adopted texts which give opportunity for phonetic teaching based upon sound principles, proved by research, endorsed by those in a position to know, *i.e.*, the leading educators in the field of beginning reading. Until more research proves better methods for the initial approach to reading, Texas first grade teachers cannot go far wrong in following the phonetic practices recommended by their basal texts.

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Functional Phonetics for Power in Reading*

Anna D. Cordts

The teaching of phonics after having been in disrepute, seems to have regained its former good standing in the schools. Children are again being taught that *run*, *red* and *read* all begin with the sound of (er) exactly as they were forty years ago. One hears again the old refrain: er-run,

run; er-ed, *red*; er-ead, *read*. The sound of *d* is called (du); *b*, (bu); *c*, (cu); and *g*, (gu). So it's du-og, *dog*; bu-ack, *back*; cu-ake, *cake*; and gu-oose, *goose*; nowhere else in the world, but in the primary grades of many of our schools.

When seven year old Phillip S. came suddenly upon a name he had not seen

* *Elementary English*, XXX (February, 1953), 91-94.

before, he said with boyish boldness, "I'll sound it out; uh-ber-uh-hu-uh-am. Abraham! Abraham Lincoln, that's it! Abraham Lincoln!"

Would anyone contend it was Phillip's phonics, or was it more likely his 143 I.Q. that came to the rescue?

When I ask first grade teachers why they persist in teaching the sounds incorrectly, or why they teach their pupils to "sound out" the words at all, they tell me (a) they didn't know their way was wrong; and (b) they have always considered phonics a valuable aid in learning to read. When I ask intermediate and upper grade teachers to explain their pupils' inability to handle the reading vocabulary intelligently, they say the children don't know their phonics. They haven't the vaguest idea how to attack a new word.

Let a teacher address a group of parents on any of the school's activities, and someone in the audience will not fail to ask: "Why is it that the children aren't learning to read?" And then: "Why don't the schools teach phonics the way they used to?"

Most parents look to phonics as the panacea for their children's reading ills; and when Jack can't read well enough to get his lessons it must be because he hasn't learned to sound out the new words he meets on the printed page. To tell these parents that their children *are* learning the sounds of the letters leaves them confounded in their confusion and their children still unable to handle the reading vocabulary.

Several years ago a study was made to determine (a) the relative frequency of occurrence of the phonetic elements in the primary reading vocabulary; and (b) the various phonetic combinations and their frequency of occurrence in the primary reading vocabulary. This study, contained within the field of the science of phonetics, was followed by experimental research with children in the first, second, and third grades to determine (a) the order

in which the phonetic units should be taught; and (b) how they should be taught as a means of word recognition in reading.

These studies terminated in a simple, nonsounding technic for identifying new words in reading. By this means 86.4% of all the words in the children's reading vocabulary may be identified, leaving 13.6% to be remembered by their form or configuration.

The technic employs 85 known words called cue words, since they provide the cues for identifying the reading vocabulary. Each word yields one cue, and one cue only. One of these is (sa) learned from the cue word *sand*; and recognized in *saddle*; *salad*; *sap*; *salary*; *sack*; *salmon*; *Sally*; *sandals*; *sacrifice*; *Saturday*; *satisfied*; in all the words in which the cue occurs.

Another cue is the ending (t) in *goat*. By blending (sa) and (t) the pupil knows the word *sat* and *for all time*. If he forgets it (a likely assumption) he can get it again from his cue words without anyone's help. Having once identified it by its known parts he can do it again as often as necessary.

Moreover, the pupil now knows the most significant syllable in *Saturday*; and *satisfied*; and in *Saturn*, an important name in elementary science. If he also knows the word *day* the context will take him the rest of the way to *Saturday*. And if he knows the word, *is*, he can identify *satisfied*, as six year old Joe did when he read from the board: "Billy said, 'I am satisfied'."

"I knew *sat is*," Joe explained, "and then I got *satisfied*."

And so that's how Joe too was satisfied.

Thus by knowing, not only the whole words, *sand* and *goat*, but also their cues (sa) and (t) the pupil is able to extend his knowledge and experience to many other words. In some instances as many as fifty new words can be identified by means of a single additional cue. But most important of all, the pupil is learning to use

a successful means of identifying the new words he is sure to meet in his reading.

It is significant to note that identifying a new word by this technic is not unlike that of reading a new sentence. That is, the pupil recognizes a new word by its known parts in the same way that he reads a new sentence made up of known parts, or words. Since reading comes first, and word analysis later, the children are not learning a new method so much as applying an accustomed procedure to a new situation. And carrying the analogy still further, it would be as unthinkable for a reader to sound a new word as it would be to sound out a sentence.

Experimental data showed conclusively that when new words are identified by their known parts there is no loss in comprehension when a new word is encountered. Since the new word is but an aggregate of known parts, the reader takes it in his stride while reading, without losing the thread of the thought, thus maintaining comprehension throughout the reading process.

Comprehension, of course, is not a single skill, but a composite of many abilities; and while it is dependent upon intelligence and a background of experiences, it is influenced by good and poor methods of reading, including the ways and means of attacking new words. If the reader has to stop to sound a word, or wait for someone to tell it to him, he can hardly be expected, at the same time, to understand what he is reading.

The cues required for independent word recognition are presented here in their cue words, and in the order in which they can most readily be learned, based on (a) the phonetic nature of the cues; (b) the relative frequency of occurrence of the units (or cues) in the primary reading vocabulary; and (c) the relative ease, or difficulty in learning the cues. (The cues may be presented in any known words in which they occur, but must never be taught in isolation.)

The "Short a" Beginning Cues

<i>sand</i>	<i>cats</i>	<i>hats</i>
<i>bags</i>	<i>rabbit</i>	<i>lamp</i>

The First Ten Ending Cues

<i>goat</i>	<i>truck</i>	<i>watch</i>	<i>dog</i>	<i>drum</i>
<i>clown</i>	<i>sled</i>	<i>sheep</i>	<i>bell</i>	<i>chief</i>

The "Short i" Beginning Cues

<i>dishes</i>	<i>pig</i>	<i>chicks</i>
<i>window</i>	<i>kittens</i>	<i>whistle</i>

The "Short u" Beginning Cues

<i>bus</i>	<i>ducks</i>
<i>jugs</i>	<i>hunter</i>

The "Short e" Beginning Cues

<i>bed</i>	<i>letter</i>	<i>men</i>	<i>nest</i>
<i>seven</i>	<i>fence</i>	<i>tent</i>	<i>shell</i>

The "Short o" Beginning Cues

<i>robins</i>	<i>pocket</i>
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"Long Vowel" Cues

<i>bees</i>	<i>gate</i>	<i>bone</i>
<i>leaves</i>	<i>kite</i>	<i>mule</i>

The Last Five Ending Cues*

<i>cup</i>	<i>prize</i>	<i>moth</i>
<i>fish</i>	<i>cave</i>	

Other Beginning Cues

<i>vase</i>	<i>plane</i>	<i>spade</i>	<i>grapes</i>
<i>thistle</i>	<i>slide</i>	<i>crabs</i>	<i>bridge</i>
<i>stove</i>	<i>blocks</i>	<i>dress</i>	<i>frog</i>
<i>clock</i>	<i>flag</i>	<i>trees</i>	<i>swing</i>

The "Digraph" and Diphthong Cues

<i>train</i>	<i>pie</i>	<i>corn</i>	<i>chair</i>
<i>tray</i>	<i>suit</i>	<i>barn</i>	<i>house</i>
<i>boat</i>	<i>goose</i>	<i>turkey</i>	<i>cow</i>
<i>crow</i>	<i>books</i>	<i>birds</i>	<i>coins</i>
<i>fly</i>	<i>saw</i>	<i>ferns</i>	<i>toys</i>

The Last Two Beginning Cues

<i>queen</i>	<i>yard</i>
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* There are no cues for the endings *s* and *ng*. Since the letter *s* so frequently represents the sound (x) it was found more practical to teach both voiced and voiceless endings as the plural forms of nouns. The ending *ng* has practical value only as it occurs with a vowel as in *ing*.

The following points should not be overlooked.

1. Any given letter may have several pronunciations, since the same letter is not always associated with the same sound. The letters *ea*, for example, are pronounced "long e" in *bead*; but "short e" in *bread*; "long e" in *mean*, but "short e" in *meant*. It was found, however, that the discrepancy between letters and sounds poses no problem when children are taught to read for meaning. Barbara E. illustrated this point when after having read the sentence "But that was not what the man meant," she informed her teacher: "I thought, at first, that the word was *mean-t* (mēnt). But that didn't make sense, so I knew it had to be *meant*."

The moral being: Teach children to use their heads! Only by their meaning in context can the correct pronunciation of words like the following be determined: *lead*, *read*, *row*, *bow*, *sow*. Many words in the children's reading depend upon their meaning, the manner in which they are used, for their pronunciation. This is true, whether with or without the benefit of word analysis technics.

2. Experiment showed that a pupil may know a word as a whole, and not know its parts. For example, he may recognize the word *sand* on sight, and not know the unit (sa) in *sand*. It follows, then, that children must be taught to recognize the units in their cue words. It may not be left to chance.

3. To recognize known parts in new words is a basic skill in learning to read. And to be skilled in any art, one must have practiced the art. Children usually do not enter school bringing their skills with them. They *have to learn* to read, to write, to organize their ideas in logical sequence, and to communicate courteously with one another. Every skill required for successful living and learning in school and in

life outside of school must be practiced, if the skill is to function when needed. And being able to identify the new words in reading is not an exception to the rule.

When Janet B., age 6 years and 9 months, met the word *caterpillar* for the first time, she explained how she had worked out the new word. "I saw *cater*"; she said, "and then I saw *cater pill*; and then I knew it was *caterpillar*."

How did Janet come to know the syllable (er)? From having met it again and again in words like *her*, *mother*, *father*, *water*, *farmer*. How did she know *pill*? "I got *pi* from *pig* and *ll* from *ball*" she told us, "and that made *pill*."

Janet might have gotten (pi) from *picture* or any other known word beginning with (pi). And she might have gotten (ll) from *bell* as well as *ball*. Janet, having learned through not one but many experiences *how* to help herself in identifying a new word, was able entirely on her own to meet the need when it arose.

A daily fifteen minute period will start the young learner on his way toward independence in reading, when the practice is purposeful, systematic, and phonetically as well as psychologically sound. Then, when he begs his teacher, "Don't help me! I can work it out. I know it. I can read the whole thing!" he is experiencing not only the thrill of his power over the printed page but is well on his way toward becoming a successful reader; able to cope with his basic readers; his science and health books; all his text and storybooks; and later his arithmetic problems; his history and geography or social science textbooks; all reading matter he has the intelligence to comprehend; and *under his own power*—a goal that means so much, and can be so easily and joyfully achieved, yet is so seldom realized in the elementary schools of our land.

IV

Vocabulary

VOCABULARY

Words are the tools of accurate thought. Since reading is a form of thinking, words are the tools of reading. Definiteness, accuracy, and precision in the use of words are requisites for effective reading. A good vocabulary is the master key to good comprehension.

One of the main tasks in teaching reading in the lower elementary grades may be designated as that of bringing the number of words in the child's auditory vocabulary close to the number of words in the "sight vocabulary." The average child's auditory or speaking vocabulary, according to reports in the literature, was considered until a few years ago to be approximately eight hundred words. Now the number is known to be nearer two thousand words. Few books in the lower elementary grades contain more than one thousand different words. So the early task is clearly not that of learning the meanings of many new words. Rather it is that of developing what is usually designated a "sight vocabulary." A "sight vocabulary" means a seeing-hearing-thinking vocabulary.

Vocabulary building can be a fascinating activity for both the teacher and the learner if the teacher is enthusiastic in the task and is master of the requisite methods and techniques. Development of the concept of the four-dimension vocabulary by both teacher and pupils at the beginning of a program for vocabulary growth provides a comprehensive understanding of the task.

A person's vocabulary may be considered to have the four dimensions, length, breadth, depth, and time. Length is the number of words for which one knows at least one meaning. The length of this list of at-least-one-meaning words grows until the average person learns tens of thousands of them.

The vocabulary must have breadth also, that is, one must know more than one meaning for almost all words. Many words have many different meanings. An unabridged dictionary gives fifty-one meanings for the word "run." The clock will run. The engineer went on his daily run. The hunter jumped across the run so as not to get his feet wet. There was a run in her stockings. Tears run from the eyes. He will run in the races. The motor will run. They set traps in the rat run.

These extra meanings are added by listening, reading, reasoning, and experiencing. Teachers should not be forgetful of the place of experiencing in increasing word meanings, as in the case of Donald in a rural school who knew "bar" only as a piece of iron used on the farm. When a new acquaintance from the city used "bar" in a way that did not make sense to him, he asked for an explanation and had clear imagery when his city friend explained that a "bar" was a long counter across which alcoholic drinks were served by a man in a white coat. A few days later, when called upon to recite in history, he reported that, after studying law for a long time by firelight, Lincoln was admitted behind the bar. His chagrin caused by the laughter of his friend made him skeptical when his teacher assigned Tennyson's "Crossing the Bar." The experience led him to learn all of the fourteen meanings of the word. Meaning in reading may depend as much on breadth of vocabulary as upon length.

Depth of vocabulary comes as a reader matures and comes to appreciate of the parable, metaphor, allegory, symbolism, and poetic form. In this phase of vocabulary development, as has been so clearly stated by L. DeFigh, that consideration should be given to vocabulary as it expresses more qualification, degree, implication, and figurative meaning. It is in this area of acquirement of the meaning of language that words cease to be the tools only for transmitting information and serve the reader as bearers of literature through verbal forms, such as allegory, metaphor, and parable.

The fourth dimension of vocabulary is time. Vocabulary building is a life-long process.

How Many Words Does a Child Know?*

Nancy Larrick

As teachers, we are continuously stressing the size of a child's vocabulary. This practice shows up in our spelling lists, in our use of vocabulary-controlled basic readers, in our mental aptitude tests, in standardized reading tests. For example, the I.Q. test is in part a vocabulary test. Rightly or wrongly, we say that Betsy has greater mental ability, greater native wit, if she is familiar with many different words.

We take it for granted that it is good for a child to have a large vocabulary. But what is a large vocabulary for a first grader? For a fourth grader? For a college freshman? Make your wildest guess. Then try it on your next weekend visitor in need of a guessing game. My bet is that unless you have studied the more recent research, your guess will be far below the estimates shown in such research. Because we do seem to operate in a vocabulary-centered curriculum, these research findings have tremendous significance for all who are concerned with the child's language development.

WHY VOCABULARY IS DIFFICULT TO MEASURE

For many years people tried to record the language of children by writing down what they heard the child say. Such reports were full of errors and omissions because of the onrush of words that may character-

ize a child's spontaneous speech. Not until I tried to make such a record myself did I realize how difficult it is to record by hand the conversation of a young child. Even for the expert stenographer, he will go too fast at certain times. With the very young, there are many combinations of sounds which are not identifiable as words, many incomplete sentences, and frequently a rapidly shifting train of thought.

Now that such conversations can be recorded mechanically, we can make an accurate and complete study of a child's language. However, I have found only one piece of published research based on the mechanically recorded language of children.

But recording the words an individual uses is only part of the problem. We still have the difficulty of counting the number of different words he has used. Do we count the singular noun *ball* as one word and the plural *balls* as the same word or a different word? What about *quick* and *quickly*, *run* and *running*, *have* and *had*?

Should such nicknames and diminutives as "Quack-Quack" for *duck* be counted as a word? Should the proper names of places and persons be counted? The decisions on all of these questions have varied greatly not only among those who have tried to measure the extent of vocabulary but by those who have attempted to measure the reading difficulty of a story or book.

But even if there were agreement on these questions, the vocabulary count of a

* *The Reading Teacher*, VII (December, 1953), 100-104.

Depth of vocabulary comes as a reader matures and comes to understanding and appreciation of the parable, metaphor, allegory, symbolism, and poetic form. It is in this phase of vocabulary development, as has been so clearly stated by Loris DeFigh, that consideration should be given to vocabulary as it expresses mood, qualification, degree, implication, and figurative meaning. It is in this area of acquirement of the meaning of language that words cease to be the tools only for transmitting information and serve the reader as bearers of literate happiness through verbal forms, such as allegory, metaphor, and parable.

The fourth dimension of vocabulary is time. Vocabulary building is a life-long process.

plings from dictionaries of 100,000 to 450,000 words with college students and adults.

Seashore and Eckerson worked out a word recognition test based on a dictionary of 371,000 words. They tried this on college freshmen and sophomores and found the estimated vocabulary of the average student in the group was 155,736.

It is interesting to note that none of the tests based on a large dictionary sample was used with children until 1941. Then Mary Katherine Smith used the Seashore-Eckerson test on public school children in a farm village, a middle class suburban city, and a mixed rural-suburban village. Her findings indicated that the vocabulary of children in the grades had been grossly underestimated. Note the contrast in the following estimates for Grade 7 (12-year-olds.)

Terman & Childs	1912	18,000	7,200
Kirkpatrick	1907	28,000	10,666
Smith, M. K.	1941	371,000	55,000

Smith's study included children from each of the twelve grades. She estimated that first graders have a vocabulary of 24,000 words, roughly 17,000 basic words and 7,000 derived words.

In 1925 and 1926, records had been made of the language of two groups of six-year-olds. Both of these indicated that a first grader probably had a vocabulary of 2,500 words. In 1936, E. W. Dolch published an article in which he estimated the average first grader's vocabulary at 2,703 words.

Mary Katherine Smith's estimate of 24,000 words for a first grader's vocabulary was almost ten times as big as any earlier estimates for the same grade.

Then the fireworks began. Papers were read, articles were written, letters were sent to the editor, cross examinations were set up at several of the professional meetings. Seashore and Mary Katherine Smith were the targets for most of the criticism.

Then Hartmann published his findings of several years earlier and made the state-

ment that Seashore's estimate for the vocabulary of college undergraduates was "fantastically low." Using a sample from a larger dictionary than Seashore and Eckerson had used, Hartmann estimated that the average college student had a vocabulary 100,000 words greater than Seashore had estimated.

Although Hartmann's figures were much higher than Seashore's for college students, there seems to have been little discussion or debate about these estimates of vocabulary size. The debate centered about Mary Katherine Smith's figures for the vocabulary of elementary and high school children. As late as November, 1949, *Elementary English* carried a detailed criticism of Smith's figures by Dr. Dolch and a documented refutation by Dr. Seashore. In his statement, Dr. Seashore explained that Smith's figures should not be considered national norms since they had been determined by tests in only three schools. He also pointed out that the figures for the various grades had been arrived at by testing different children in these grades although it might have been more accurate to test the same children as they moved from grade to grade through the years.

SUBSTANTIATING EVIDENCE

Since the Smith report in 1941, a number of scholars have used the test-by-sample technique in an attempt to estimate the vocabularies of children. All of these have produced estimates much larger than those based on the smaller dictionary or those of the earlier record-and-count technique.

The Seashore-Eckerson test, used by M. K. Smith, was also used by Schulman and Havighurst in 1947 and by Cynthia Colvin in 1951. Their findings can be compared to Smith's findings as follows:

Schulman	9th	38,930	37,906
Schulman	10th	41,400	43,100
Colvin	7th	33,461	35,000

recorded conversation would not give the child's complete vocabulary. This is because it is a measure of the words needed for that particular occasion, not the measure of the words that *might have been used* if the situation had been different.

Another great difficulty in measuring vocabulary comes from the many meanings which a single word may have. In his speech a child may show that he knows *green* as a color, but does he know *green* meaning *not ripe*? In the research studies, it is generally assumed that a child "knows" a word if he recognizes one meaning of the word. Yet that is not a very satisfactory ruling when we want to measure the extent of a person's vocabulary.

WAYS IN WHICH VOCABULARY HAS BEEN MEASURED

Five important methods of measuring vocabulary have been used:

1. *Counting the different words recorded from the conversation or speech in a "natural" situation.*
2. *Counting the different words used in the written work of an individual.* For example, in the past students have tabulated the different words used by Shakespeare in his writing, and assumed that the grand total of words written by Shakespeare made up his total vocabulary. By this time, we are ready to agree that Shakespeare probably knew thousands of words, or even hundreds of thousands, not recorded in his written work.
3. *Counting the different words listed by children in a "free-association" test.* This means asking children to list any or all words that come to mind and then counting the number of words so listed.
4. *Counting the different words listed by children in a stimulus-response test.* This means asking children to list all words suggested by a picture or some such general topic as home, school, farm, or store.
5. *Estimating the extent of vocabulary from the number of words recognized on*

a selected list. This involves two big questions: (a) How do we test recognition? and (b) How do we select the list of words for the test? A survey of the literature shows that there has been rather general agreement on the former and violent disagreement on the latter.

Seashore and Eckerson devised a Vocabulary Recognition Test which combines the most commonly used tests of word recognition: multiple-choice and writing out definitions. Others have used similar devices.

With young children who can neither read nor write, this and similar word recognition tests are given orally with the examiner recording the child's definition or use in a sentence. Older children can write their own answers.

CHOOSING THE SAMPLE OF WORDS

The real debate has arisen over the selection of a list of words for such a test. For many years research studies have been made using a scientific sampling of words taken from a dictionary list. On this general principle there seems to be little controversy. The fighting breaks out over the size of the dictionary to be used. Should it be a dictionary of 18,000 words such as Terman and Childs used in 1912? At the time of their study, scholars seemed to agree that a child couldn't possibly have a vocabulary as large as 18,000 words so a sampling from such a list would be adequate.

Some years later, Gillette tested himself with the same list and estimated his vocabulary to be 16,833 words. Then he tested himself with a sampling of words from a dictionary of 209,000 words. When he used this larger list, the size of his estimated vocabulary was 127,888 words. The contrast was so marked that scholars quickly realized there must be some relation between the size of the word list from which the sample was taken and the size of the estimated vocabulary. In the thirties, a number of studies were made using sam-

How Large Are Children's Vocabularies?*

Fred E. Bryan

The question of the size of children's vocabularies seemed fairly well settled until Robert H. Seashore, professor of psychology at Northwestern University, came up with his bombshell. He asserts that the common estimates of teachers, research specialists, and textbook writers "are frequently less than 10 per cent of the true size as estimated from written definitions of representative sample lists taken from unabridged dictionaries."

The studies of W. F. Jones, Edward L. Thorndike, Ernest Horn, B. R. Buckingham and E. W. Dolch, and Henry D. Rinsland tend to stress the limitations of the average vocabularies of children. In contrast to these references to limited vocabularies, Seashore contends that the average first grader knows 24,000 different words, that the average sixth grader knows 49,500 different words, that the average high school student knows 80,000 different words, and that the average university student knows 157,000 different words. In counting "different" words, Seashore includes both "basic" and "derived" words. He arrived at these estimates by taking a systematic sampling of words from an unabridged dictionary. A test devised on the basis of this sampling was administered to children in Grades I-XII by Mary Katherine Smith. On the basis of the results, she asserts that the absolute size of vocabularies throughout the grades greatly exceeds past estimates.

* *Elementary English*, December, 1954, 210-16.

Textbook-writers base their material on the accepted word lists compiled by investigators in the field. If it is true that these estimates are too small, then our children have been starved by the narrowness of their reading material. If, on the other hand, these accepted lists are too large, children are being urged beyond their ability. Further, if it is found that the vocabularies of children are much larger than we have been led to believe, it behooves educators to do everything possible to enrich, rather than limit, the word power of children.

PLAN OF PROCEDURE OF PRESENT STUDY

A further check was conducted to test the hypothesis that children's vocabularies have been underestimated because they have been developed from (1) single time situations, (2) limited geographical areas, and (3) single response situations. To do this, it was necessary to devise a plan for periodically checking vocabularies of children under different geographical conditions, at different seasons of the year, and with common areas of experience used as response stimuli. It was assumed that the influence of these three conditions might reveal knowledge of words which would remain dormant unless some such circumstance had stimulated recall.

A test booklet containing three separate tests was constructed. The first test is a free-association test similar to the ones

Of the three new estimates given, one is greater than Smith's, two are roughly 2,000 words less. But all three are very close to the Smith figures, so close as to substantiate the general size of children's vocabulary as estimated by Smith.

SUMMARY OF RESEARCH

A survey of the research in this field warrants certain significant conclusions:

1. Vocabulary estimates which are based on a sampling from an unabridged dictionary are much larger than those based on a sampling from an abridged dictionary.

2. Repeated tests with college undergraduates and adults show that their estimated vocabulary is certainly over 100,000 words, probably over 200,000 words.

3. It would be expected that such vocabulary growth would be gradual through the years of the individual's growth. Certainly if a college sophomore, probably aged 20, has a vocabulary of 155,000 words roughly (Seashore and Eckerson, 1940), it seems hard to believe that he could have known only some 7,200 words as a seventh grader just eight years earlier, as Terman and Childs estimated.

4. The findings of Schulman and Havighurst with ninth and tenth grades and of Colvin with seventh graders approximate those of Smith within a range of 2,000 words. This seems to substantiate Smith's estimates.

WHAT DOES THIS MEAN FOR CLASSROOM TEACHERS?

In our eagerness to have children master the 18 words in the pre-primer or even the 258 words in a more advanced reader, it is easy to forget the tremendous number of words that a child can identify by ear at least.

There was a day when a child was introduced to new words only through the

language he met in his home, school and community. Often that was a very limited number of words. But today he is hearing the language of radio and television as well. Mars, Jupiter and Saturn are familiar place names, for he is surely hearing these "space terms." Formosa and Panmunjom, Syngman Rhee and Malenkov are heard almost daily. It seems likely, then, that the average child's vocabulary is far larger today than it was ten or fifteen years ago. Because most children are regular TV followers, it is possible that their vocabulary may be richer in certain areas than that of their teacher who has no TV set and seldom watches a TV program.

In the light of this situation, there are certain questions that we may well ask ourselves as we try to work out a rich language program in the classroom:

1. Are we making the most of the child's very extensive acquaintance with words—through a rich variety of reading materials, through his own creative use of language both oral and written, and through a broad expanse of subject matter?

2. Are we giving children a chance to use the vocabulary they have acquired outside of the classroom—a vocabulary that is pertinent to the child because he has learned it through some exciting experience or some entertainment such as a TV show?

3. Are we keeping our own vocabulary ahead of, or even up to, the child's growing acquaintance with words so that we can help to create a classroom experience that is rich and vivid and stimulating?

These are questions which have no pat answers, of course. But they warrant coming back to if we are to make the most of what we know about the vocabulary of children.

In order to get an adequate sampling of the Seashore tests, all the tests were stacked heterogeneously by grades, and every fifth test was selected and checked with a score card provided by Seashore. The total number of words actually known on the test after correction was made for guessing, multiplied by 505 (the sample of the dictionary on which the test is constructed is 1/505 of all such words in the dictionary),

found that they had written a total of 9,469 different words, as shown in Table 1. There were 463 words which could not be used in Grade VI because they did not have a frequency of two or more.

On the basis of an adequate sampling of the Seashore tests, it was found that the median size of the vocabulary of second-grade children was 4,080 words (Table 2). By the time the children reached Grade

TABLE 1

TOTAL NUMBER OF DIFFERENT WORDS BY GRADES WRITTEN IN
FREE-ASSOCIATION AND STIMULUS-RESPONSE TESTS

GRADE	FALL TESTS		WINTER TESTS		SPRING TESTS		ALL TESTS
	Free-Association	Stimulus-Response	Free-Association	Stimulus-Response	Free-Association	Stimulus-Response	
II	676	353	203	158	174	92	1,656
III	376	255	159	175	160	154	1,279
IV	354	302	203	410	271	387	1,927
V	372	332	284	422	384	382	2,176
VI ..	660	522	338	248	364	299	2,431
All grades	2,438	1,764	1,187	1,413	1,353	1,314	9,469

gave the total number of words purported to be known by the individual.

VI the median vocabulary had risen to 25,573 words.

NUMBER OF WORDS KNOWN BY CHILDREN

Almost 100 per cent of the teachers and administrators of the participating schools responded. In all, 6,780 free-association tests were administered to 2,260 different children. A total of 1,110,435 words were written by these children. A total of 6,870 stimulus-response tests were taken by 2,290 different children. These children wrote a total of 1,332,240 words. When we combine the words written in both the free-association and the stimulus-response tests, we get a grand total of 2,442,675. This figure can be compared with Buckingham and Dolch's total of 2,714,857.

Combining the number of words written by children of Grades II-VI in both the free-association and the stimulus-response tests in an accumulating manner, it was

TABLE 2

COMPARISON OF MEDIAN VOCABULARIES
FOUND IN SEASHORE-ECKERSON STUDY
AND IN THIS STUDY

Grade	Seashore Median	Median in This Study
II	21,900	4,080
III	25,600	11,615
IV	28,400	13,130
V	25,600	21,543
VI	34,000	25,573

As shown in Table 3, the children of Grades II-VI wrote 6,733 different words in the free-association study made by Buckingham and Dolch. When the children in the present study were given the free-association test at different seasons of the year in different geographical locations, and when the stimulus-response test was

used by Buckingham and Dolch and Figurel.

The second test is a stimulus-response test. It is used to stimulate the thinking of the children taking the test by recalling common areas of experience for them. Ten areas were used: "Home," "School," "Farm," "Store," "Ways People Travel," "Sunday and Church," "Work and Play," "Stories You Have Heard or Read," "Radio and Movies," and "City." Many other areas could have been used, but it was felt that these ten were sufficient to check the hypothesis that children can reveal knowledge of more words if they are helped to recall them.

The third test is an exact copy of the multiple-choice English Recognition Vocabulary Test by Seashore and L. D. Eckerson. Permission to use this test was granted by Seashore. In order to assure the administration of these tests under the same circumstances and at the same time, all three tests were printed in a twelve-page booklet. Before any distribution was made, 7,500 booklets containing 22,500 tests were ordered.

It was decided that elementary-school children in Grades II-VI in various socioeconomic areas could be tested with the greatest facility. The tests were administered in many different, widely separated communities throughout the United States, in areas of different socioeconomic status. Schools in the oil fields of Texas, a plantation school in Alabama, a private school in Hollywood, California, and rural and urban schools in Pennsylvania are examples of the varying types of communities where the schools in which the children were tested are located.

The tests were sent to these communities three different times during the year:

- (1) autumn—September 15 to October 15;
- (2) winter—January 15 to February 15;
- (3) spring—May 1 to May 31.

The first distribution was made in the autumn of the year. Approximately twenty-five hundred test booklets were dis-

tributed personally or by express to those who had previously agreed to help with the administration. Detailed instructions were sent with each set of tests.

METHOD OF TABULATING WORDS

After the test booklets for the autumn were returned, tabulation was begun immediately. Tabulation followed the rules laid down by Thorndike in the introduction to *A Teacher's Word Book*. No attempt was made to tabulate the total frequencies of all the words in the test booklet, since to do so would have been an impossible task for one person.

All the words written in the free-association test in the autumn by children of Grade II were tabulated first. In starting with Grade II, the writer followed the same order of grades as did Buckingham and Dolch. They felt that "it was necessary to progress from the lowest grade upward, since the words which do not belong in Grade II naturally would be left for Grade III; those not suitable for Grade III would be left for Grade IV; and so on."

In order to determine which words belonged to each grade, a subjective method similar to Figurel's was employed. All the words with a frequency of two or more in the free-association test in the autumn for Grade II were tabulated. A word having a frequency of one was carried over, and when it appeared a second time, credit was given to the test and grade in which it appeared. Thus, a word may have appeared the first time in the autumn free-association test for Grade II and not have appeared again until the stimulus-response test in the spring for Grade III. Grade III would then be given the credit for the word. All the tests were tabulated in this way: autumn, winter, and then spring for Grade II; autumn, winter, and then spring for Grade III, and so on, until all the free-association and stimulus-response tests through the spring for Grade VI were completed.

after his English Recognition Test was administered by Smith to a limited number of children in a single locality during one season of the year. In the present study, Seashore's test was administered to a large number of children in various parts of the United States at three different seasons of the year. The writer did not find that the children know as many words as Seashore estimates; but, based on the sampling of the dictionary, it can be theoretically assumed that children know more words than have been revealed by the free-association studies, the counting of words found in children's written work and other forms of expression, or any combination of these methods used in the past.

5. The present study shows that children of Grades II-VI know at least 10,000 words. The number of words that children know would undoubtedly be shown to be larger if the following methods of testing

were used: (a) testing the children of a greater number of socioeconomic areas of the United States; (b) testing the children more often during the year, so that various holidays, seasons, and recreational activities would recall added words; (c) recalling for the children a greater number of their common areas of experience.

6. It is the responsibility of all educators to enrich, rather than limit, the word power of children. We should encourage children to use all the words at their command and to reach for other words which could be, and should be, part of their vocabularies.

When writers of textbooks and other books for children base their materials exclusively on the existing word lists compiled by former investigators in the field, they are starving the average or the better-than-average children by the narrowness of their reading material.

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Can We Teach Word Meaning?*

Carl H. Delacato and S. Richard Moyer

The modern method of teaching reading is in part the result of the Gestalt concept of learning. Such an approach to teaching and learning, stressing "wholes" rather than "parts," has led educators to the point that the teaching of reading begins with the recognition of symbols incorporating a complete experience, i.e., a sentence. From the sentence the progress is toward the recognition of phrases, then words. Words seem to have become the irreducible

"wholes" in much of the methodology of the teaching of reading. The "word sight" or "whole" method of teaching reading has proved quite successful from the point of view of proficiency in the reading skills. This success has led us to postpone the analysis of words at a phonetic or structural level during the early phases of reading instruction. Analysis of words from the meaning aspect is, in many instances, also postponed and, in many instances, completely eliminated from the early reading activities. The old method of

* *Elementary English*, XXX (February, 1953), 102-6.

given to stimulate recall, the children of Grades II through VI wrote 9,469 different words. This is an increase of 41 per cent.

There were 567 different words in the free-association study by Buckingham and Dolch which did not appear in the present study. If these 567 words were added to the total list of different words found in this stimulus-response study, the grand total would be 10,036 words for children of Grades II-VI, inclusive. This is almost 50 per cent more words than found by Buckingham and Dolch.

TABLE 3
COMPARATIVE SIZE OF
VOCABULARIES

Grade	Buckingham and Dolch Free-Association-Study	Present Stimulus-Response Study
Preschool	1,759	1,794*
II	984	556
III	863	875
IV	767	1,778
V	1,100	2,136
VI	1,260	2,330
All grades	6,733	9,469

* Written by children in Grades II-VI but appearing on the preschool list of the International Kindergarten Union list.

CONCLUSIONS AND IMPLICATIONS

1. "The Vocabularies of School Pupils" by E. L. Thorndike, often referred to as our chief help in estimating the size of children's vocabularies, was made in 1924. The Buckingham-Dolch study which resulted in their *Combined Word List* was made in 1936. The accuracy of these studies cannot be questioned, but the vocabularies of children in the days before radio and television cannot be compared with their vocabularies of today. If textbook-writers depend on studies made twenty-five years ago, or even fifteen years ago, they are not challenging the children to use the words met in their daily living. To our new word lists we must add

colorcast, microwave, cloud-seeding, radio-active, and hundreds of other words which modern living accepts as commonplace.

2. It is evident from the findings of the present study that children will reveal a knowledge of more words if external stimuli to recall are either provided or taken advantage of.

Children will reveal a greater number of words if their attention is called to common areas of experience, such as home, school, church, farm, city, and circus. The present study stimulated the recall of a greater number of words than revealed by the free-association study alone. It is reasonable to believe that children would reveal even larger vocabularies if they were stimulated by a greater number of common areas of experience.

Children will also reveal a greater number of words if they are given an opportunity to write their lists during different seasons of the year—autumn, winter, spring, summer.

The total vocabulary of all children will be found larger than it is thought to be at present if the children to be tested are selected from various locations in the United States and from communities of varying socioeconomic conditions.

3. The free-association method alone does not give children the opportunity to reveal their true vocabularies. Buckingham and Dolch found only 6,733 different words for children of Grades II-VI in their free-association study. The writer combined the free-association study with a stimulus-response study and found 10,036 different words known by children in these same grades. This is almost a 50 per cent increase over the words found by the free-association method.

4. Seashore asserts that the common estimates of teachers, research specialists, and textbook-writers are frequently less than 10 per cent of the true size as estimated from written definitions of a representative sample list taken from unabridged dictionaries. Seashore made this assertion

Healthy meanings are those which fall in the denotative class and the informative aspect of the connotative class. From the statements of these meanings we are able to draw our most universally valid inferences, and admittedly the purpose of learning is to get data which allow us to live in and manipulate our environment as efficiently as possible. The mark of the neurotic and the maladjusted person is his inefficiency in manipulating his environment. He consistently behaves in such a way as to thwart his own wants and desires relative to his environment. Only valid inferences help him to take realistic cognizance of his environment.

When we deal, however, with denotative and informative connotative meanings we must remember that these are abstractions. They are statements about the referent but none of them takes into consideration all the characteristics of the referent. Each statement deals with only part of the characteristics of the referent and is therefore misleading in one sense or another. The ideal situation is to teach the child to be conscious always of the fact that meanings are abstractions and therefore deal with only a part of the object or referent.

HOW CHILDREN LEARN WORD MEANINGS

Ordinarily none of the preceding distinctions will take place in the teacher's thinking. Indiscriminately the child is taught denotation, affective connotation, and informative connotation. Sometimes we find that the teacher teaches the most intense affective connotations absolutely unconsciously. These may range through the erotic to warm likes, disgusts, mild disapproval to anger, hate, and through fear to extreme fright. The teacher need not express these meanings in words to teach them. The child takes his cues from overtones in factual words (not pertaining to these affects or emotions), tonal volume, stance, bodily tension (muscular), changes

of tempo, motion of the hands and body, unconscious facial expression, and the like. The child unconsciously learns the teacher's affective connotations from these cues by a well known psychological process called empathy.

Let us imagine now what might happen as the result of Miss Brown, a confirmed dog lover teaching first grade. Her affective connotations relative to the word "dog" are taught to her pupils, either by direct statement, or by empathic processes, or both. The child who has little or no experience with dogs accepts her ideas and subsequently is bitten by a vicious dog. In another classroom in the same school, Miss Jones, with a lifelong fear of dogs, teaches another first grade class. By the same process some of her children who have little experience with dogs develop an unreasonable fear of dogs. As if this were not enough, two small boys, one from each class, meet on the playground at recess, start discussing dogs and get into a violent fight because one holds that dogs are friendly and the other, that they are dangerous. Extend this to other words and age levels and we can soon see that dangerous situations, disagreements, and poor adjustment may develop when inexperienced children are taught affective connotations.

It is obvious that affective connotations are mostly ideas of meaning about a word which are purely personal, obviously emotional, and may be in conflict with what everyone else believes is the meaning of the word. Furthermore, these connotations may lead to completely invalid reasoning.

Such affective connotation may at times be partially offset by denotation and informative connotation. Let us suppose that because the teacher thinks the children all know the meaning of the word in question, she neglects to give any definitions or meanings. Some of the children are not sure or others do not know the meaning of the word. They must get the meaning from context and from the affective con-

teaching reading, which was based on the mechanical analysis of words as the primary instructional basis, brought forth a reaction toward word analysis in any form. The analysis of word meanings has suffered from this reaction and children's ability to understand word meanings has suffered from this feeling that most analytical activities related to words was to be postponed or omitted from the educational structure.

PROBLEM

The authors feel that this tendency to slight the analytical activities in the early stages of reading is contributing to a weakness on the part of children to understand word meanings and their relationships to reality. They feel that the weakness is the result of the tendency of teachers to approach all phases of reading through the "whole" method and in so doing, to eliminate the needed analytical experiences in the area of meaning in the early reading activities.

The ascertainment of the meaning of words for the beginning reader is a direct function of his apperceptive background. Such apperceptions vary with children and in many instances need enrichment. This enrichment can be accomplished only through the creation of an understanding of the function of the meaning of language and through the creation of a new emphasis for its presentation to children during their early reading experiences.

TYPES OF WORD MEANINGS

The meaning of a word may be broken down for convenience' sake into two different types. There is the *denotative* meaning and the *connotative* meaning. The connotative meaning has two different aspects, the *informative* and the *affective*.

The denotative meaning is concerned with the object that the word names. This object is called the *referent*. Let us consider the word "dog." The object or referent of the word "dog" is any and all of

the familiar animals we know so intimately as pets, see on the street, and in our gardens, to which we apply this term. The denotative meaning then covers all of the characteristics of all of the dogs which exist, have ever existed, or ever will exist. The denotative meaning is, as we can see, an abstraction and refers to no real dog in existence. We can refer to real dogs by names such as Mr. Jones' dog, Rover, or Mr. Smith's dog, Fido. Here the referent is one certain dog, that is, Rover or Fido. We should remember, however, that we cannot say the object or the referent, we can only say the word "dog," "Fido," or "Rover," which stand for the referent. From the foregoing we might draw the conclusions that "dog" is an abstract term and "dog Fido" is a concrete term, but strangely, all words or terms are abstract. This fact has been presented by A. Korzybski in his book, *Science and Sanity*. The proof of this fact is too complex to go into here but a short, concise, layman's version or Korzybski's discussion appears in S. I. Hayakawa's *Language in Action*.

Connotations of a word or term are those meanings which occur to us upon hearing or seeing a word which is not covered by the denotative meaning. For instance, all that the denotative meaning of "dog" contains, is those things we can see when we look at the animals for which the word "dog" is a name. The connotative meaning carries more content. The informative aspect of the connotative meaning of the word "dog" carries such statements as "a mammal," "a quadruped," "a carnivora," or "a domesticated animal." The affective aspects of the connotative meaning of the word "dog" carry such statements as "a vicious animal," "a friendly animal," "a smelly animal," "man's best friend," or "a noisy animal." As we can see, these affective connotations depend entirely or almost entirely on the emotional feelings of the person thinking about or saying the word "dog."

SUMMARY

The "whole" method of teaching reading has led us to overlook the value of the analytic approach to the teaching of reading in its early stages. The analysis of the meaning of words and the presentation of those meanings within the structure of the experience unit are important contributions to the language proficiency and the mental health of the children. The planning of a unit must include as one of its most important phases research, on the part of the teacher, relative to the meaning of the words which will be introduced. A recapitulation and discussion of the meanings of these words following the unit, in

which the denotative and connotative informative meanings are separated from the connotative affective meanings, will help the child to clarify his thinking relative to the words with which he has been working. Such clarifications help children to deal more effectively with the environment and in so doing, tend to improve language proficiency and to make a significant contribution toward mental health. Such clarification of the meanings of words will provide children with valid apperceptions and functional intellectual data which will facilitate and foster more adequate relationships with the realities of the environment.

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Getting Acquainted with Words*

Gertrude Hildreth

Reading is largely a matter of responding with split-second speed to the precise meanings of words in sentences. The more words you recognize instantly, the wider your span of recognition and the more efficiently you read. How many words have you in your reading stock-pile? How did you gain all this knowledge? How can one's reading vocabulary be increased? All these questions are pertinent to reading instruction all the way from first grade to college.

LEARNING PRINCIPLES

A number of important learning principles apply to the development of word mastery in reading.

* *The Reading Teacher*, VIII (December, 1954), 95-99.

1. In teaching reading, always remember the purpose for which children are learning words, that is, to *get accurate meanings* from sentences whether reading orally or to one's self. All practice and drill for building basic word-recognition skills should be directed toward this end.

2. Learning words is all bound up with the life and experiences, the wishes, goals and purposes of the individual learner. A word will be easier to learn if it represents something the child knows and enjoys. A word may be difficult merely because it recalls something emotionally disturbing.

3. Reading is a language activity, first, last, and all the time. Problems of word recognition are all tied up with children's use of words in conversation. Their grasp

notation which the teacher reflects in her behavior through the process of empathy whenever the word is used. At best, meaning drawn from context is partial and all too often misleading. This, coupled with the affective connotations the child picks up, gives him a biased meaning of the word or an absolutely invalid meaning.

THE TEACHING OF WORD MEANING

The indications are that we should not teach children affective connotations of words. But how are we to escape this since they seem to be so deeply imbedded in the emotional processes of the teacher?

This can be accomplished primarily by teaching decisively and clearly the denotative meaning and informative connotative meaning of the word. Such instruction should in most cases help greatly to offset any affective connotations the teacher may express unconsciously. Such a program may be carried out by the teacher by planning, previous to the introduction of an experience unit, with the aid of the dictionary and an idea of the referent, as to just what denotative meanings are to be taught. In addition, reference books such as the encyclopedia, standard school texts, and materials published specifically for unit reference will present a clear picture of just what informative connotative meanings are to be taught. Naturally these meanings are best taught, through the medium of the experience unit, but in some instances we may find that many loose ends are left when a unit has been completed. These must be tied up in discussion which evokes and unifies all aspects of both the denotative and informative connotative meanings of the word. On the other hand, we may find the experience unit presents affective connotative meanings quite blatantly without an apparent way to circumscribe it. As an example, let us assume that a first grade experience unit on pets presents our mythical "dog" as man's best friend. What happens if he bites? If the unit can carry the

meaning load we should present him as of dual aspect, we should bring out the biting aspects of the personality he is. That is, in some cases he bites, in others, he wags his tail. If the experience unit can't carry the meaning load, "dog" becomes the subject of a post mortem unifying discussion of our experience unit. Such an exposition offsets the onesidedness of most affective connotations and gives it a multi-valued perspective rather than a onesided perspective.

Such a process, which makes clear the various aspects of the meaning of a word or term by calling for definitions during the planning phase of the unit, may help the teacher to understand and rid herself of certain affective connotations in which she believes. For instance, the sorting out of meanings into denotative, informative connotative, and affective connotative categories may help her to understand that the dog who bites is only one of many dogs. Biting is not necessarily a rule for dogs, and hence does not call for an emotional reaction of fear when the word "dog" is mentioned.

The authors feel that the planning of units of experience toward denotative and informative connotative meanings, plus the emphasis on the understanding of meanings will not only facilitate the child's ability to think logically and realistically, but also will help him to acquire reading skills more easily. They further feel that it will tend to prevent reading problems which are in part related to the inability to comprehend written symbols because of a lack of understanding of meanings. They have found that emphasis of the meaning of experiences and words and the correction of the affective connotations of words are important factors in helping children to overcome reading problems. They further feel that the teaching of denotative and informative connotative meanings will give children new tools with which to deal with their environment effectively.

be false to assume that if words are once pronounced they must forever after be orally articulated in the course of reading. Even an eight-year-old soon catches on to the idea that talking out loud while reading is slow stuff. If you want to get on with this exciting story, better look ahead faster and not take time to say every part of every word. A little later he becomes more and more proficient at guessing words from context, so that what was originally a crutch (the pronouncing) can now be discarded. However, during these transition stages much depends upon how the teacher manages the process, what sorts of materials are used, how much follow-up checking is done, and so on. If the new and hard words come too fast, of course, no child short of a genius could make the shift to more effective use of context clues.

LEARNING TO RECOGNIZE WORDS IN CONTEXT READING

The "Look and Say" context approach to word recognition is recommended for a number of reasons:

1. The words are always met in a meaningful setting which insures understanding of the meaning each word is intended to have in this particular sentence. Otherwise words other than these would compose the sentence.

2. A linkage is possible with the child's own spoken, conversational language.

3. Ultimately this is the way the child must read. The sooner he begins establishing the particular combination of habits he will need as a mature reader, the more capable he will be in the end. Adage No. 1 of the psychology of learning is that "we learn what we practice and in the way we practice it." If I learn words on cards or in a vertical column that's the way I'll know them best.

Why is it easier to recognize words in reading context than separately, e.g., on a flash card or in a vertical row? Why, simply because the surrounding familiar words supply clues to meaning. One word

alongside another greatly enhances the chance of a correct guess at either. I'm reading along about "jumping over an old fence." Next time I come to "Jumped over old" in this story my best guess at the next word is "fence." How easily a child can remember *bear, rabbit, rooster* in a funny story, especially one that is illuminated with humorous pictures.

Consider the contrast between trying to learn a stock of words in (a) context and (b) in columns, for example:

- (a) *What fun to play in the snow.
We will play snow ball.
We will make a snow man.
How funny you look, old snowman!*
- (b) *play how make
man look will
old the fun*

Strange as it seems, the individual words even *look different* out of context than inside the sentence. That's the way the mind works in this realm of visual perception.

There is mounting evidence that of 100 words at the child's level of understanding, 70-85 per cent of these words could be recalled after a few exposures with good "look and say" sentences; whereas, probably not more than 20-30 per cent could be retained when taught as "separates." Better just go ahead and say the words as you do in talking. "We will make a snowman." But won't the *slow learner* benefit more from the single word, monadic approach? No, because he has some intelligence and can learn by thinking, too.

For building reading vocabulary the best advice is to go right ahead and read and read without spending too much time on preliminary or accessory activity, but with the sympathetic aid of the teacher always at hand. The pupil should try to get the new word from the context if he can, then he's more apt to recall it next time.

Here's one small point that seems to have escaped notice. Words divided at the end of a line offer difficulties for children

of word meaning is linked with their understanding of these same words in their own spoken sentences. If we forget this in teaching, even for one reading period, failure may result because difficulties in learning are proportionate to the "distance" between the child's language and that of his reading text. It is a safe conjecture that children know and understand no more of their native tongue than they can *actually speak themselves*. We should keep this fact in mind when acquainting children with their reading words. In all study of reading problem cases, explore thoroughly the child's use and comprehension of his language. In the lacks found there may lie the clue to his disability.

4. Words are easier for a child to learn and remember if he can get the precise meaning in mind so that he can use the idea in his thinking. This point ties up with the foregoing.

5. Learning to read is a conditioning process, analogous to the child's first steps in learning to speak. The familiar speech symbols which were learned through a long process of associating speech symbols with the various ideas represented must now become attached to the new printed graphic word symbols, those little series of black marks on the white paper. Ultimately these printed symbols will "speak" to us just as surely as our parents and friends do. The various parts of the process are storing up visual impressions of the word forms, linking the visual to the oral response and to other clues such as pictures, catching clues to the new or forgotten word in the context of the sentences themselves.

PRONOUNCING AIDS LEARNING WORDS

Pronouncing reinforces the conditioning process, helps to impress words on the mind, because our first associations with these same words are oral. If the child uses the word naturally in talking, hears the word pronounced as he looks at it, pref-

erably with an interesting picture alongside, then says the word to himself, with a few repetitions, he should know the word. There is evidence that a child can recall words he has used in conversation and can pronounce them more easily than those he has merely seen the same number of times. Forming these clang-associations (Klang-gestalten as the Germans call them) is invaluable in stocking the child's word bank. How strengthening and heartening it must be for a child to hear his own voice or that of the teacher using these strange new words in a perfectly natural way. This principle of approach to words through pronunciation applies both to short, common words, as well as to the polysyllabic ones.

Pronouncing a word while looking at the printed form is the first step in learning to recognize the word later from *visual clues alone*. After a number of repetitions of this association a glance at the word recalls its meaning without noticeable vocalizing. Pronouncing a word forces attention to all parts of the word in succession, a decided aid in the discrimination of confusing word pairs.

Here's another advantage of word-pronouncing. It leads right on into sounding. Word-pronunciation finally becomes identified with sounding for clues to new, difficult, and longer words. Even a seven-year-old is bright enough to see that familiar words, often repeated, such as *chick, chair, child, choo-choo*, all begin with the same familiar sound. With help from the teacher in making these identifications, he becomes more and more dextrous in sounding "big" words for himself. Here's the beginning of intrinsic phonics, the auditory word-analysis principle. In fact, this is the only approach that will safely transfer for most children to recognition of new and forgotten words.

But won't pronouncing each word form the habit of "word calling," which we know is a meaningless exercise and a slow process? Not necessarily. It would

begins to increase more rapidly. The child who depends on visual clues alone will make numerous errors because of confusing words that look alike on first glance. The mature reader confines sounding largely to the foreparts of words, but when he meets difficulties, finds he has guessed wrong, he backtracks and explores the whole word. The children's sounding experience should be confined to total, meaningful words; and should be practiced daily in "look and say."

Will tracing help? You can now answer this question for yourself. Definitely "yes" if it means always pronouncing the word before and after tracing, always working with words that are meaningful because the child knows them orally, to begin with, and always trying to read the traced words immediately in "look and say" context. Otherwise this activity is just tracing, not good for anything but "learning to trace."

In all reading activities encourage the

child's own effort 150 per cent. Never give help ahead of the time it is needed, nor give more help than needed. Respect the child's request, "Don't help me. I can get it, I want to guess it myself." Why deprive him of a little fun and a valuable learning experience? The young mother who insists on feeding the child because he's messy when he could feed himself, is making the same mistake as the reading teacher who is afraid the child "might make a mistake." Give the pupil time to recall a word. It may recur to him after a moment's reflection, and he is strengthened for knowing the word for sure next time.

These children in our school have lively intelligence, at every turn they demonstrate that they can learn, they are eager to experiment, they like to puzzle things out. If they find they can get some sense out of the activity because they see the meaning in it, they will keep right on learning, and no one can stop them.

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Vocabulary Building*

Mary Meighen

It has been said that language is caught not taught. Children's literary powers are influenced by the teacher's example—her correct speech, natural pleasing voice, clear enunciation, and fluent, flexible vocabulary.

The school program provides a variety of activities which will build up the child's vocabulary:

excursions	pictures
experiments	discussions
dramatization	victrola records
educational films	exhibits
playground experiences	pets
use of maps—globes	

* *The Grade Teacher*, LXXI (February, 1954), 58-59.

that those of us who are mature readers might not suspect. Wouldn't it be a fine thing (though not most economical for the publishers) to print all sentences for children through the third grade, and even higher for the slow learners, without any broken words at the ends of the lines, even though this means coming out with lines of uneven length on most pages. Who will be the first to try it?

Let us remind ourselves at this point that these first "look and say" experiences with reading vocabulary should underscore the *say* part of the phrase; they should be *oral*, in harmony with the ideas about word pronunciation given above. Yes, reading can be taught to children as a wholly visual process without audible vocalizing, but the deaf children also do best when reading and speech are being learned simultaneously; and normal hearing and speaking children are found to vocalize right along in non-oral reading. As someone has said, even breathing and sentence understanding go together! But we thought that pronouncing was chiefly for oral audience reading. No, only in part, because articulated reading is the direct route to mature, independent, silent reading. Before reading, always have conversation based on the text: then the child can use all the intelligence he has in "guessing" at each new word with a high per cent of accuracy.

ON TO WORD MASTERY

For mastery, for the necessary "over-learning" that makes for self-confidence, ease, and pleasure in the task, the child must meet his new word friends repeatedly in varied context. Otherwise, he has only memorized, and may even "read" his book upside down. Do not underestimate the amount of "look and say" practice that will be needed for learning troublesome words. The children themselves will manage to get plenty of rehearsal if the right material is put in their way.

Some hints for getting the hard words: suggest to the pupil, "Look at the picture. What do you think the word would be?" Ask questions that direct thinking; "What was the rabbit talking about? Where did Mr. Froggie live?" etc.

Check each child's knowledge of every new word in the text, day by day, to make sure that he has *learned each word thoroughly*. Every commonly-used word passed over only partly learned must be paid for later in stumbling, hesitating inaccuracy. However, remember that one day a child may know a word, the next day he may not. This is not necessarily a sign that he is stupid. It happens to all of us getting under way in new skills. Make a note of the words missed and review them later both in and out of context. Watch out for the demon words: *also, when, for, before, almost*, etc. These are relational words representing abstractions. It is notorious that children and abstractions don't mix well.

Why must every new word be treated as though it were a brand new item? English is full of compound words, e.g., *carload, livestock, sundial, mountainside*; and twenty-five per cent or more of our vocabulary is made up of words derived from common base forms, e.g., *cook, cooking, cooker, cookstove; able, unable, disabled, capable*. Require the pupils to do some thinking for themselves when they come to these words. Encourage them to do all the generalizing they possibly can while reading.

In the early stages a child is bound to be a word-by-word, finger-pointing reader. This is evidence of sound sense because he is only at the toddler state. Let him toddle around fearlessly (but stay by and watch), and he'll soon skip and run.

WHAT ABOUT SOUNDING?

Sounding is begun with the natural pronunciation of words in the "look and say" experience. More and more sounding will be needed as the number of new words

pack of wolves, drove of cattle, shoal of fish.

12. Collections or Quantities

bunch of flowers, heap of stones, bundle of clothes, sheaf of wheat, stack of hay, drift of snow, dozen of eggs, set of dishes, batch of bread.

VOCABULARY SEATWORK

Exercise I. There are many sound and action words which are especially fitting to nature and the out-of-doors.

From the following list of words decide which you will place in the blank in each sentence given below. Do not copy the sentences. Then write the correct word for each sentence after the number of the sentence on your paper.

- | | |
|--------------|---------------|
| 1. pattered | 11. swayed |
| 2. rustled | 12. sparkled |
| 3. crackled | 13. fluttered |
| 4. nodded | 14. rushed |
| 5. gurgled | 15. crunched |
| 6. echoed | 16. dashed |
| 7. raged | 17. lapped |
| 8. scudded | 18. crashed |
| 9. rumbled | 19. sank |
| 10. trickled | 20. whistled |

- The snow _____ under our feet.
- The water of the little lake _____ on the sandy beach.
- The burning branches _____ in the campfire.
- The huge tree _____ to the ground.
- The wind _____ through the trees.
- The snowflakes _____ to the ground.
- The gentle rain _____ on the dry leaves.
- The brook _____ over the stones.
- The dry leaves _____ in the wind.
- The children's voices _____ in the hills.
- The waves _____ against the rocks.
- The slender trees _____ in the high wind.
- The storm _____ all day.
- The cloud _____ across the sky.
- The thunder _____ through the valley.

- The tiny stream _____ through the rocks.
- The torrent _____ through the gorge.
- The sun _____ in the early sunshine.
- The dew _____ in the early sunshine.
- The flowers _____ in the breeze.

List other words which show the movement of water, wind, snow, clouds.

Exercise II. In all lines of work there are people who are in charge of projects or groups of workers.

Can you match the names of the directors in Column I to the name of the group, the activity, or the project in Column II?

I	II
1. captain	a. newspaper
2. manager	b. orchestra
3. commander	c. football team
4. president	d. bank
5. director	e. army
6. chairman	f. fire department
7. judge	g. mill
8. chief	h. court of law
9. coach	i. department in a store
10. conductor	j. committee
11. editor-in-chief	k. college

Exercise III. The child contacts many words which are used to denote the passing of time, such as, years, a little while, a long time, long long ago. Attention given to some of these words will be of definite help to the child in his reading.

Number your papers from 1 to 16 to correspond to the numbers of the sentences below. Do not copy the sentences. Look over the following list of words carefully. Select a word which you think best completes each sentence. Then write each word after the number of the sentence on your paper.

- | | |
|-------------------------|----------------|
| 1. a long long time ago | 5. by and by |
| 2. season | 6. at once |
| 3. nights | 7. a long time |
| 4. soon | 8. yesterday |
| | 9. all night |

The teacher who gives attention to the following points will build up the vocabulary of the children in her group:

1. Build up a stimulating atmosphere which coincides with the child's interests and challenges his thinking.
2. Provide flexible instruction for differentiated groups.
3. Emphasize the meaning of vocabulary through wide reading.
4. Give attention to the following steps in the development of a new word—hearing, seeing, saying, using.
5. Keep reading materials fitted to the child's interests and ability.
6. Call attention to unusual words in poems and stories.
7. Keep lists of new words from nature study and other interests.
8. Dramatization—Encourage the child to use original conversation freely.
9. Make children aware of words which apply to local and world news.
Example: Our city is celebrating the *centennial* of its settlement.
The Community Chest *Drive* started today.
10. Have children report on interesting trips or experiences.
11. Compliment children on the use of interesting new words.
12. Introduce vocabulary games that will challenge children to acquire new words.

These activities focus attention on different phases of words:

1. Associate Words
 - a.) *Weather*. cold, stormy, sunny, hot, chilly, foggy, frosty, damp, snowy, windy, cloudy.
 - b.) *Fall*. falling leaves, frost, shorter days, lower temperature, warmer clothes.
2. Gay or Happy Words

joyful, pleasant, smiling, cheerful, laughing, jovial, jolly, merry, festive, joking.
3. Noisy Words

bang, clang, shrill, scream, cry, call, whistle, stamp, clap, crash.

4. Complimentary Words

pleasant, good-natured, attractive, generous, helpful, kind, ambitious, thoughtful, graceful.

5. Words to Describe Foods

baked, steamed, boiled, fried, cool, hot, delicious, juicy, fresh, stale, well-cooked, sour, sweet, tart, bitter.

6. Quiet Words

softly, silently, still, dim, quiet, restful, sleepy, speechless, calm, peaceful, undisturbed.

7. Synonyms

Synonyms for the word *funny* (meaning amusing), amusing, humorous, entertaining, laughable, comical.

Synonyms for the word *funny* (meaning queer), strange, uncommon, weird, odd, unusual, unique, queer, peculiar, curious.

8. Words Having Multiple Meanings

Like the word *set*:

To *set* a hen.

The doctor *sets* a bone.

To *set* out on a journey.

To *set* a clock.

To *set* type.

To *set* in an upright position.

The *setting* for a play.

A *set* of dishes.

9. Opposites

helpful—helpless

kind—unkind

agreeable—disagreeable

long—short

resident—nonresident

sanitary—unsanitary

Call attention to prefixes and suffixes that change the meaning of words.

10. Words Meaning Groups of People

crew, group, party, squad, committee, audience, gang, class, congregation, troop, congress, club, host, mob, shoppers, throng, company, players, tribe, team, passengers, orchestra, band, school, union, guests, crowd, convention.

11. Groups of Animals

herd of cows, school of fish, flock of ducks, team of horses, swarm of bees,

ing is necessarily equivalent to experience. Much experience—much meaning; little experience, little meaning. And since words are symbols for meaning, words must be symbols for experience. The more experience one has had, the more word meaning he has; the less experience one has had, the less word meaning he has. According to this view, the only way to expand vocabulary is to expand experience. It believes that the function of the school is to expand experience, and that along with this expanding experience, vocabulary is expanded naturally and inevitably.

Thus stated, the two views seem very far apart: according to the traditional view, vocabulary is learned from people, from reading, from the dictionary; according to the more recent view, vocabulary is built up by the individual's experience only. But having stated this apparent opposition, we can now begin to consider how both of the two views are true in greater or less degree, and how they are interrelated.

EXPANDING VOCABULARY WITHOUT INCREASING MEANINGS

We should begin by admitting that a great deal of our "vocabulary building" in school actually amounts to expanding the child's vocabulary without increasing his meanings. For instance, we can tell a student that the front end of a boat is called the *bow*, and the rear end is called the *stern*. He now has two new words, but his stock of meaning is not increased. He still thinks "front end of a boat" or "rear end of a boat," but now he has new symbols for this old meaning. The student has, however, benefited to the extent that, in each case, he now has one word in place of five words, and he may use this shorter way of thinking or of expressing himself.

Similarly, if we tell the student, or a dictionary tells him, that *nutrition* or *sustenance* means *food*, he again has expanded his vocabulary but without expanding meaning. It is just a case of "new word for old word." This kind of expanding of

vocabulary can well be called "synonyms without distinction." New words are given for old meanings, and the student has not increased his stock of meaning at all. Of course, he has been benefited, for he can now "understand" these new words when he hears or reads them. That is, he gets *some* meaning instead of *no* meaning, but it is the old meaning already attached to a known word.

NEW MEANINGS FROM OLD

Teachers and dictionaries and glossaries often give these "synonyms without distinction" just because they are in a hurry or because there is no time to go further. But the good teacher always tries, if she can, to show the distinction between new and old. She can say that *nutrition* means "food that builds the body," and that *sustenance* means "food that sustains life" or a more expanded explanation of these same ideas. These are "synonyms with distinction."

Pointing out the distinction between synonyms is the same process as "explaining" the meaning of new words. For instance, one may say a seascape is a "view of the sea," leaving it a matter of bare "new word for old word." But when one adds that the word compares with *landscape*, which is a "view of the land," one has explained, and added something new. One has "put two and two together." As the slogan says, something new has been added. This newness is a relationship which was not seen before. And any newness is new experience; hence this is a new experience for the student. It is new meaning made from the interrelationships of old meanings.

It is probably true that the largest part of our present educational process is this making of new meanings from old. The student brings to school meanings which correspond with his experiences at home, in the community, and in previous years of school. With those meanings, he listens to what we say or he reads the books as-

10. last year
11. within a few hours
12. in a little while
13. years ago
14. minutes
15. in the early days
16. some day
17. next summer
18. now
19. often
20. early
21. tomorrow
22. evening
23. day before
24. next year

1. _____ passed before the traveler returned to his home.
2. Your train will be here in a few _____.
3. _____ people traveled in covered wagons.
4. Cars must start _____ when the policeman blows his whistle.
5. _____ was a nicer day than today.
6. _____ people lived in caves.
7. Ladies' hats are usually worn only during the _____.

8. I hope _____ will be a nice day.
 9. Mother has her hat on and will _____ be ready to go.
 10. _____ in the morning the milkman comes to our house.
 11. I cannot come now but I will come _____.
 12. The wind blew _____ long.
 13. _____ I was a year younger than I am now.
 14. _____ I will be a year older.
 15. _____ I hope to be as tall as my father.
 16. The man worked and worked and after _____ the house was finished.
- Superior pupils may check on the use of the following words:

centennial
fourscore
fortnight

biannual
annual
tercentenary

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Vocabulary Development*

E. W. Dolch

Our conception of the problem of vocabulary development in the school depends on which of two very different ideas of "learning" we may adhere to. The older and still most widespread idea of learning is that it is acquiring or "getting" — a kind of accumulation. According to this opinion, one gathers knowledge much as he may collect stamps, or earn money, or acquire more acres of land. It believes that knowledge is "learned" in a way which is essentially memorizing. Thus one learns the combinations in arithmetic, one

learns the capitals of the 48 states, one learns new word meanings. Vocabulary development, according to this idea, results from being told word meanings and remembering what one has been told. Or it consists of looking up word meanings in the dictionary and remembering what one has found there. It presupposes that people or books have the word meanings. We learn the word meanings from them. In that way we accumulate a large vocabulary. This is, in brief, one very common view of vocabulary development.

The other view of vocabulary development starts from the premise that mean-

* *Elementary English*, XXX (February, 1953), 70-75.

Obviously, the purpose of the audio-visual program is to give new experiences so that children will get new meanings. It is most unfortunate therefore that the audio-visual movement has not been given its logical place. It is still a sort of step-child, thought of as a sort of nice supplement to school work but not of too great importance. It is of vital importance, however, and it can be made so by a certain type of planning that has been neglected.

To use the audio-visual program to its fullest in every subject at every level, the first step is to list the concepts or word meanings we want the children to acquire at that level. Then let us go through the list of concepts, each represented, of course, by a word, and see *what new experiences a real comprehension of the word requires*. Then see *how that experience can be planned for by the school*. It is as simple as that. It will be found that some words can be given meaning by pictures. Let us accumulate those pictures. Others need the seeing or handling of objects. Let the teacher set all persons in a search for those objects. This may mean the real objects or models. For instance, a Chinese junk can be got in miniature form that will show all of the characteristics of that kind of ship (but it must include the figure of a man to show size). Other words require hearing, and the teacher may give the hearing experiences or collect phonograph records that will do so. Other words require doing, and the plan can be made for the children actually to carry out some activity for this purpose. The essence of this suggestion is that "meaning from new experience" be planned for and be made a positive, necessary part of the program.

The actual use of audio-visual aids is often quite different. The special department or the teacher casts about for some materials or activities that are related to the course. These may or may not fit the vocabulary development demanded by the course. Usually they give invaluable aid, but they also leave great gaps in providing

meanings for the needed vocabulary of the subject. And because audio-visual aids are not specifically tied to vocabulary development, all persons concerned are likely to think of them as a luxury, as a kind of extra. But they are not an extra or a supplement. They are the essence of the course, so far as meaning vocabulary is concerned.

Of course, all sorts of related audio-visual aids should be used in every course, over and above those required for the specific vocabulary. Audio-visual aids add much to interest. They give much information not listed in the textbook or in the outline of a course. They expand meaning vocabulary beyond the list any teacher might make. The criticism we have made of the usual audio-visual program is not to limit its present method of use, but to add to that method by a careful inventory of just what experiences are demanded by the meanings we want the children to have.

One kind of new experience which has special interest to language teachers has often been neglected; that is "performance experiences" or "doing things" instead of talking about them. For instance, we talk a great deal about children "learning how to write," but do we plan that writing as real experience? We often make it seem a sort of stunt at which some are good and some are not. Why not definitely think of writing as experience? What kinds of writing experience will help children understand what writing is and how it fits into life? We can begin, of course, by saying that all children need experience at writing certain kinds of letters. So let us have them write real letters of congratulation, of condolence, of introduction, of persuasion, and so on. Let us make corrections on the letters, if necessary, and then have them copied and sent on their way through the mails. There are also various kinds of business letters that all children should have the experience of planning and writing.

signed. The symbols he hears or sees arouse his old meanings, but are planned to do something more. In every statement we make, or in every sentence of the book there is supposed to be some "newness." This newness is a new "putting together" of his past experience. The result, in addition to new ideas and thoughts, is meanings for new words or new meanings for old words. If that is the result, there has been new experience and hence true vocabulary development.

Why is it that this process of vocabulary building, so simple in principle, does not go on in every school every day to the extent it is supposed to? We know that it does not, because we all know of the thousands of young people who go through the regular "school process" but who do not come out with this expanded vocabulary. Why do they not? It is because two essential conditions are lacking, conditions that we as teachers must try to maintain.

First, if we are going to rearrange old meanings into new ones, *the old meanings must be there*; and they often are not. Every subject we teach presupposes a huge stock of old meanings. Are they there? If we gave in every class a vocabulary pretest before we began a course, we would be appalled. In a history course, for instance, we would find that the words referring to the aspects of our government, such as *Congress, executive, taxes*, or what not, are familiar but little more. In science, we would find that elementary terms such as *soil* or *moisture* have the faintest or vaguest meanings. This condition will only be remedied when every course has its rigorous and complete pretest to make sure that students have the old meanings which the textbook and teacher so naively assume.

The *second* essential for forming new meanings from old is interest. This process of putting old meanings together is done in each pupil's own mind. When the individual does it, he has an individual insight into the subject. But unless he does

it, he has only a "verbal formula." Children are full of these verbal formulae. They give definitions such as "an island is a piece of land entirely surrounded by water" but get no new meaning. If you ask "Is Australia an island?" they are puzzled. They are likely to say no, but then not to be able to explain. Then you have to explain that what makes an island an island is that the water cuts it off or isolates it from other countries and peoples and so makes it different from an ordinary country. If each student can think of ways in which an island is isolated or cut off, he begins to get a new experience and therefore new meaning. So a "new verbal formula" is not new meaning unless the individual does some active "putting together" of his own. If he just repeats, it is still "just new words for old words."

When these two requirements are met, children love vocabulary building. When they "know what they are talking about," and when they are interested in the subject, they actively grasp new terms, and they modify and enlarge meanings for old terms. It is fascinating to see the process at work. The children show such a sense of power, and expanding personality. They feel they are "learning," and we all love to learn. Anyone who has participated in such learning sessions will go to great lengths to see that the old meanings are actually there, and that there is interest in working with them.

NEW EXPERIENCES FOR NEW MEANINGS

Modern schools are not satisfied, however, merely to rearrange and rework the old meanings which the children bring. Children have, after all, seen little and done little and felt little. If we rely entirely on the meanings and experiences they bring to school, we actually have not much to work with. So one of the major aims of the modern school is to see that children have new experiences.

doing and why we are doing it. Of course we do many things in school just because we have always done them, but as the years pass, more and more men and women in education are looking hard at what they are doing and asking, "Should I be doing this, or doing it in this way?" Such a question is answered, for vocabulary development, only by looking for the aim and purpose. We have pointed out (1) that it is beneficial to a reasonable degree merely to give new words for old words, so that the listener or reader may get some meaning, even if not the fullest meaning. Then (2) we have shown that we can

really get new meanings from old meanings if there is newness in the combination, that is, if the words put together old experiences that have never been joined before. But (3) we need to give more attention to giving new experiences for the sake of new meanings and vocabulary development. We need to do this systematically, discovering the need for new experience and then planning to give it. Finally (4) we will keep on developing meaning vocabulary incidentally whenever the opportunity offers for making new meanings from old, or for providing new experiences that give new meanings.

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Vocabulary Development*

Loris DeFigh

Reading is by nature a thoughtful activity. The chief characteristic of any good silent reading performance is mental elaboration of ideas. The ideas are those presented by the writer, those brought into the reading situation by the reader out of his own past experiences, the new ones created, and the old ones modified by the intermingling of the two. Ideas must be understood when presented; they must be interpreted, evaluated, and applied in some way in order for reading to serve a worthy purpose.

However, none of this mental activity involving ideas could happen without adequate command of the means by which the ideas are first stimulated. Words are the "triggers" that set up the patterns of

thought in the reader's mind at the outset. Without complete understanding of these "triggers," the whole communicative experience would be impossible. Both writer and reader must understand the symbolic system employed in order to engage in linguistic intercourse. Words and ideas are inseparable. The former is a means to the latter. This being the case, emphasis must be placed on vocabulary control and development in any good reading program. Students must, as they express it, "talk the lingo" of many areas of expressed ideas. They must become sensitive to the thought conveyed. They cannot be like the oral reader who expressed with exactness a selection to an audience, but upon being questioned about the ideas she had read, replied, "I don't know. I wasn't listening."

* Used by permission of the author.

absolutely essential in the approach to word-learning. College reading programs have no other choice than to assume the remedial job of supplying the necessary instruction in these skills to students whose previous training in them has proved inadequate. Without the ability to employ these lower-level skills, we cannot move with the student into the word study areas that employ higher level abilities in vocabulary development.

HOW DOES A VOCABULARY GROW?

Vocabulary development is a gradual process of growth in word control. This growth process proceeds in three directions which might be referred to as height, breadth, and depth.

Height begins the process. Children build their knowledge of words upon words, acquiring more and more in number, piling them up higher and higher. Through listening and talking, the number of known words increases until by the age of six, when they enter school, they bring with them a speaking and listening knowledge of approximately 2,500 words. Then the reading vocabulary is introduced. In the beginning much of the vocabulary consists of a transfer of terms from those already known in speaking and listening to the reading and writing situations. After a while, the vocabularies of all the facets of language become more parallel and together move upward in an interrelated way. Words met in reading must become usable to the student in speaking and writing. Words heard and seen must convey meaning in reading situations.

In order to change unfamiliar words into familiar ones, one must acquire a working command over certain types of skills: (1) those concerned with pronunciation, and (2) those concerned with understanding meaning.

Students attempting to attack an unfamiliar word must employ the following aids:

- a. Use of the context surrounding the unknown word as a means of figuring out what the word is;
- b. Use of certain analysis techniques, either phonetic or structural, i.e., consonant letter sounds, vowels, syllabic accent, etc.;
- c. Use of the dictionary.

These aids are very useful to the student if he knows how to use them. Many college students do not. It has been my unfortunate experience to encounter many college freshmen who have no *working* knowledge of the independent attack that can be made upon a word.

They seem to be unequipped to make use of the very elementary knowledge of the application of the final *e* principle, vowel digraph principle, understandings concerning syllable division, assignment of vowel sounds within syllables, etc. when attempting to pronounce a new word. They depend upon context as best they can, or, if they are really concerned about complete clarification of the word, they seek it in the dictionary. If they are not concerned, they ignore it and go on without a clarification.

A young freshman I observed recently will serve as an example of the use that can be made of some of these skills. I watched him attack the word *antipathy* as follows: He first analyzed visually the word's structure; that is, its root plus the prefix *anti*, and noted the *y* ending, often found on noun forms. He recognized the meaning of *anti* as "against." So he reasoned the word as naming something which is against something. His next step was to identify the meaning of *path*. He made an association at this point; he recalled that the word *sympathy* contained the same word part. This word means "same feeling" or "being of the same frame of mind." Therefore, *path* in *antipathy* must mean "*feeling*," and with the prefix *anti*, the meaning must be "feeling against something," or "being of opposite frame of mind." He checked his reasoning

Individuals are constantly expressing their own ideas in one way or another. They are also continuously engaged in getting impressions of the ideas of others. All human beings have natural urges to communicate with one another. They will develop these abilities in the natural course of growth. In a systematic program of developing ability to express thoughts or derive impressions, we are simply training individuals to do with greater effectiveness what they have the natural urge to do, and would do, in one way or another, anyway.

Students have a need to develop two kinds of vocabularies: an *expressive* vocabulary which includes the symbols used in writing and speaking, and the *impressive* vocabulary which they will use in reading and listening. There will be symbols that students will know as a part of one of the above vocabularies and not the other. For example, it is not uncommon for a student to have a "hearing" knowledge of a term and yet be unable to use it to express an idea of his own. Recently I overheard a student remark about a work, "Sure, I know that. I've heard it lots of times!" but when asked to give a clear explanation of its meaning, or to use it correctly to express an idea, he was completely at a loss to do so. We superficially hear words used and see them in print, without any clearcut concept of the reaction their use should stimulate in our minds.

The example cited is illustrative of one of the major problems in vocabulary development at the college level—namely, to make students more acutely aware of their vocabulary inadequacies. Years of practice in passing superficially over words they do not know, moving blithely along the lines of print, happily ignoring whatever strange words are there, are not conducive to vocabulary growth.

One of the first steps toward vocabulary development among college students is to develop a "word conscience;" a word con-

science that nags at the reader every time he snubs a symbolic friend. He must learn to recognize when a word does not create an impression in his mind and discipline himself to see its meaning at once, both in the present context where it occurs, and also wherever else it might be encountered presenting a different concept.

A second problem with which we must deal is an inadequate background of experiences necessary for the varied interpretations that must be made by the reader in widely differentiated areas of content. This is particularly true at the college level where higher level reading materials deal with ideas that are so abstract, so elusive, or so "long ago and far away" from the experiences of the reader. I can recall a young man with whom I worked recently who, over the years of precollege, had approached the problem of vocabulary extension largely through looking up lists of words in the dictionary. He had looked over the meanings given, assumed they said somewhat the same thing, picked out the shortest one—he was physically lazy as well as mentally so—and wrote it down. Upon the surprising discovery of the extent to which one can go in interpreting and using a single term, he cried in distress, "I'll never learn all that! I thought I knew *the meaning* of these words!" When words can stand for so many concepts, many of which the student has not an adequate experience to develop, we have an extremely hazardous pitfall to avoid; that of *talking with words about words*. To do so can become a reckless, thoughtless, and extremely worthless activity indeed.

A third problem that students present is their inability to use the skills of word attack necessary to identify the word to be learned. These skills may seem to be quite elementary to some, and it is quite true that they are first taught at the elementary school level, but nevertheless, students continue to arrive at college unable to employ the necessary tools of word attack that are

times meanings cannot be so well understood until they are placed alongside an opposite meaning for comparison. Using antonyms and synonyms is a very effective way to intensify understandings of the known word and also to stretch forth to the realms of others, some of which are unfamiliar and offer new opportunity for more word exploration.

In addition to antonyms, the word study would also include synonyms, homonyms and heteronyms. This broadening of meaning gives the student greater possibilities for interpreting intended meaning.

The third and final aspect of the vocabulary development process is depth. This is a much more subtle phase of the process than the first two and has its place at the higher levels only, after a firm foundation for it has been established in the two phases previously discussed. In this aspect we must consider vocabulary as it expresses mood, qualification, degree, implication, association, and figurative meaning. This phase of language development, perhaps more than the others, builds an appreciation of the richness of our language. Figurative language should not be restricted to the reading of fairy tales, poetry, and legends of childhood. We must not overlook the opportunities offered in the study of idioms, satire, irony, and non-literal language as we work with students at the higher levels.

They need to feel the undertones, to sense bias, the exaggerated, the playing up of one understanding and the minimizing of another, through clever choice of words.

They need to recognize the emotional appeal, the sarcasm, the "goody-goody" overplay that one encounters so frequently in materials meant to propagandize, to exert pressure, and by such means to seek to control the thinking of the reader.

It would seem appropriate in summary to point out the following considerations that teachers at the college level must take note of in vocabulary development as a part of their reading programs:

1. At the college level it is not uncommon to find students at many levels in their vocabulary development. The instructional program for them must begin at the point of the development of the student and must be largely an individual matter.

2. In order to insure the student against "word-learning" on purely a verbalistic level, the words must be outgrowths of actual or vicarious experiences of the student in language situations. Much doing, seeing, talking, and listening, as well as reading, should be the stimulus for word study.

3. Materials used should be varied in type, content, and difficulty. A good reading program develops versatility in the reader in order that he may broaden his reading experiences for his personal competence and enrichment.

4. Students should be helped to develop more wholesome attitudes about reading. They should be helped to see the value in being able to express themselves well and to interpret the ideas of others with clarity and understanding. Only through better use of their communicative abilities can they achieve their own fullest personal realization and at the same time develop complete harmony and understanding between themselves and others.

against the context, decided it made sense and continued on his way in the reading situation. He knew and employed useful tools of structural analysis to enable him to get the new word quickly without having to interrupt the line of thought while he consulted a dictionary.

It should not be assumed that the student should never use the dictionary. Indeed it can be one of his most valuable tools. However, it should truly be a tool and not a crutch. A dictionary might well be employed in the above example at the end of the reading session to check the line of reasoning of the student. In this way he may be sure his attack was correct. It should be used also when the efforts of independent attack do not yield the desired results. They cannot always do so in a complete way, but to the extent that they can be used, they are time savers and efficiency builders.

The use of the dictionary presents its own problems with students. Unfortunately their command of the dictionary skills is often so poor that they will spend as much time attempting to utilize the dictionary as they will with the actual material that they wish to read. When this is the case, the dictionary cannot function as the aid it is meant to be. If students better understood the use of guide words, the pronunciation symbols, accent marks, and other such skills concerned with locating the word and interpreting its meaning; if they were able to understand the meanings given, make the appropriate selection for the given context in which the word appears and "tune" the meaning into this context in an understandable way, much wasted effort could be conserved.

I do not wish to imply that their previous training has neglected to include the skills. Probably these students have been subjected to at least some of them before in their earlier school experience. However, it remains a fact that many of them are in college today without the command of

skills necessary to employ them effectively in their study activities.

If students were able to employ all these techniques efficiently, they would have tools with which to work toward building their stock of words, and the pile would grow higher and higher. The numbers of words added should increase continuously.

Vocabulary must grow in breadth as well as height. This means that students extend outward, broadly, their knowledge of known words. There are many ways that this is done. One way is to recognize the many forms that a single word can have and the many functions it can perform. If a new word is first met as a noun, then the student may extend his vocabulary knowledge of that single word by discovering if it can function as a verb, an adjective, or some other part of speech, sometimes by merely changing slightly its basic form or structure. This is illustrated in the word *ego*, which can become *egoist*, *egotist*, *egotistical*, *egoism*.

This knowledge can broaden still more if a student comes to understand the variant meanings the word can have, sometimes without changing its structure or function in the sentence. The simple word *line*, functioning as a noun without changing its form, may mean: a line of print, a clothes line, a telephone line, a line of attack, a line of people, a fishing line, a line of talk.

Becoming acquainted with a word's relatives can broaden the vocabulary knowledge we seek. An example of this is in the word *automobile*, which can spread its relations over a wide area to include autocrat, automotive, autobiography, automatic, autograph, automaton, autonomy, autointoxication, authority, authorize, authentic, autopsy, and many others.

One can further broaden their word understanding by association of words with other words when their meanings contrast. It has been said that, "A thing is never so black as when it's compared with white," and that is applicable here. Some-

of class or individual dictionaries can make the teaching of any of these facets of words more stimulating and interesting.

Pictures from magazines or newspapers can be used effectively. New words or the exact use of familiar ones can be developed from a picture. The process can be reversed and the picture used to clarify or illustrate meaning. Space does not permit a detailed discussion of the use of pictures at high school level for these purposes, but their value is so great, I have found, that they should not go unmentioned.

No method in itself is important. What matters is that the teacher of vocabulary building awaken in his students an appreciation of the richness and flexibility of our language. To do this he, himself, must have a feeling for the enchantment, the power, and the beauty of words. Otherwise, the teaching of vocabulary building will be for both him and his students merely a task.

EVOLVED: A PRACTICAL METHOD

Like many teachers, I have been informed, in answer to the question "Do you read the newspaper?" that the student "reads only the headlines." The frequency of this response, especially from retarded readers, provided me with an interesting method of teaching vocabulary building. It came, not as an inspiration, but as a by-product of curiosity.

I read the headlines thoughtfully myself to judge their readability and to determine just how much of the news my students could glean from them. The vocabulary of headlines, I discovered, is much more challenging than that of the context of the news.

If, then, my students were "reading only the headlines," what was the level of their comprehension?

As an assignment, I had each student bring in ten headlines. In class I asked them to tell orally what the headline meant. In that way we found, in short order, that they were unable to pronounce

many of the words, much less grasp their meaning.

Next we tried to identify the unfamiliar words, to determine their meaning and to substitute synonyms for them. From this experimentation, I evolved a method of building vocabulary, applicable in various situations and subject areas.

PROCEDURES USED

A student pastes on a paper a headline containing an unfamiliar word which he underlines. Then he lists the following:

1. a guess at its meaning from the context or from reading the initial sentences of the write-up
2. pronunciation as given in the dictionary
3. part of speech and meaning as they seem to apply in the context
4. an original sentence using the word

Such an assignment can be extended to five or ten words and readily checked for accuracy by the teacher. From several checked and revised assignments of this kind, a student can compile his own dictionary of new words or a class dictionary can be made.

The same assignment can be applied to advertisements. The use of headlines and advertisements from newspapers or magazines vitalizes the study of vocabulary building. It makes the student aware of unfamiliar words currently used in the world around him.

APPLICATION IN VARIOUS SUBJECT AREAS

Often I have had students select unfamiliar words from whatever text they found difficult to use. Instead of pasting the headlines or advertisements on their papers, they have written the sentence containing the unfamiliar word, the name of the text, and the page on which it appeared. The procedure indicated above for the headlines has then been followed to help establish mastery of the troublesome words.

High School Students Build Vocabularies*

Regina Heavey

The teaching of vocabulary building has a two fold objective. It aims to increase the number of known words in as many areas as possible and to promote mastery of partially known ones. The range of vocabulary can be extended independently only if the student has been trained in the habit of identifying new words. To obtain mastery, he must be instructed in the language arts approach to all words, both new and partially known. The ideal instructional situation is one in which both range and mastery are striven for by all teachers in all subject areas.

IMPORTANCE OF WORD ATTACK SKILLS

Training in the habit of identifying unfamiliar words begins with initial reading. In the primary grades, the pupil is encouraged to ask the teacher for help if he cannot pronounce a word or comprehend its meaning. When he does so, he is commended. As his word attack skills become better established and he learns to use the dictionary more efficiently, he gradually acquires independence in making new words his own. Unfortunately, what actually happens is not always so logical. Many students arrive in high school without having acquired the skills essential to independent word attack, without competence in the use of the dictionary, and without the habit of identifying unfamiliar words.

* *The Reading Teacher*, VII (April, 1954), 239-431.

A program of vocabulary building at secondary level, then, must of necessity include the opportunity to establish these aptitudes so that they may be readily put to use.

Because of his maturity and widening experience, there is likely to be an increasing disparity among high school students' vocabularies. He knows words he can use only in writing. Others he comprehends in context but neither spells nor uses. Some he uses in speaking but does not recognize in the printed form. A few are meaningful to him only when he hears them spoken. If he is to gain mastery of words already partially familiar to him and greater power in self-expression and comprehension, he must be taught to integrate his writing, speaking, reading and listening vocabularies. That means, then, that instruction in vocabulary building should provide opportunity and incentive, not only for reading, but for speaking, writing, and listening.

THE QUESTION OF METHODS

There are many good textbooks available that suggest a variety of methods and innumerable lists of words. The teacher who conscientiously follows one or more of these texts cannot help but improve his students' vocabularies to some extent. All the time-honored methods—the teaching of prefixes, suffixes, stems, antonyms, synonyms, homonyms—have some value. Devices such as word games or the building

on each one, as though you were handling a coin. *We would like you actually to fall in love with words.*

Words, as you know, are not dead things. They are fairly wriggling with life. They are the exciting and mysterious tokens of our thoughts, and like human beings, they are born, come to maturity, grow old and die, and sometimes they are even re-born in a new age. A word, from its birth to its death, is a process, not a static thing.

Words, like living trees, have roots, branches and leaves.

Shall we stay with this analogy for a few moments, and see how perfect it is?

The story of the root of a word is the story of its origin. The study of origins is called *etymology*, which in turn has its roots in the Greek word *etymon* meaning "true" and the Greek ending—*logia* meaning "knowledge." So *etymology* means the true knowledge of words.

Every word in our language is a frozen metaphor, a frozen picture. It is this poetry behind words that gives language its overwhelming power. And the more intimately we know the romance that lies within each word, the better understanding we will have of its meaning.

For instance, on certain occasions you will probably say that you have "calculated" the cost of something or other. What does this term "calculate" really mean? Here is the story. Years ago, ancient Romans had an instrument called a *hodometer*, or "road measurer," which corresponds to our modern taximeter. If you had hired a two-wheeled Roman vehicle to ride, say, to the Forum, you might have found in the back a tin can with a revolving cover that held a quantity of pebbles. This can was so contrived that each time the wheel turned the metal cover also revolved and a pebble dropped through a hole into the receptacle below. At the end of your trip you counted the pebbles and *calculated* your bill. You see the Latin

word for pebble was *calculus*, and that's where our word "calculate" comes from.

There are, of course, many words with much simpler histories than this. When you speak of a "surplus," for instance, you are merely saying that you have a *sur* (French for "over") *plus* (French for "more") or a *sur-plus*. That is, you have an "over-more" than you need.

Should you be in a snooty mood for the nonce, and happen to look at someone rather haughtily, your friends might call you *supercilious*, a word which comes from the Latin *supercilium*, meaning that "eyebrow" you just raised. That person you are so fond of, who has become your companion,—[*cum* (Latin for "with") and *panis* (Latin for "bread")]—is simply one who eats bread with you. That's all. Again, "trumps" in bridge is from the French "triomphe" or triumph, an old-time game of cards. In modern cards one suit is allowed to triumph over, or to "trump" the other suits. And still again, in the army, the *lieutenant* is literally one who takes the place of the captain when the latter is not around. From the French *lieu* (we use it in "in lieu of") and *tenir*, "to hold." The captain, in turn, derives from the Latin word *caput* (head); colonel comes from *columna* (the "column" that he leads).

If, by any chance, you would like to twit your friend, the Wall Street broker, just tell him that his professional title came from the Middle English word *brocour*, a *broacher*, or one who opens, or broaches, a cask to draw off the wine or liquor. We still employ the same word in the original sense when we say "he broached (or opened up) the subject." Finally the broacher, or broker, became a salesman of wine. Then of other things, such as stocks and bonds.

These are the roots of words. We next come to the branches. The branches of our language tree are those many groups of words that have grown out from one original root.

Many students have elected to select their words from biology, history, geometry, bookkeeping, or applied mechanics textbooks. Some have used more than one subject. The greatest value to be gained from applying this independent method of vocabulary building to subject areas is that it makes the student aware of how great an obstacle unfamiliar words can be to comprehension and, hence, to study. It demonstrates through convincing experience the importance of mastery of vocabulary as a basic study skill.

The method also provides the teacher with dividends. By compiling lists of unfamiliar words identified by his students, he gains a realistic picture of their vocabulary needs. When these lists consist of words selected from subject areas, such as history or geometry, he has a valuable instructional aid for teachers of these subjects. When the lists are derived from magazines and newspapers, they contain lively, current vocabulary that the student encounters daily. Because of this, these student-identified words provide appropri-

ate material for instruction in phonetic analysis or structural analysis.

POSSIBLE USES AND OUTCOMES OF METHOD

The method suggested above, designed as it is to increase range and mastery of vocabulary through a language arts approach, is not intended for any special group of students. True, the intelligent student is apt at identifying unfamiliar words and keenly interested in the acquisition of new ones. Average students and slow learners whose reading comprehension and expression are limited by the paucity of their vocabularies can, however, be trained to look for unfamiliar words and to master them.

By leading all his students to see that words can be used imaginatively, precisely, dramatically and simply, a teacher gives them a key to the interpretation and appreciation of what they read. In addition to that, he gives them a means of commanding their thoughts in lucid oral and written expression.

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The Romance of Words*

Wilfred Funk and Norman Lewis

From now on we want you to look at words intently, to be inordinately curious about them, and to examine them syllable by syllable, letter by letter. They are your tools of understanding and self-expression. Collect them. Keep them in

*From Wilfred Funk and Norman Lewis, *30 Days to a More Powerful Vocabulary*, Pocket Books ed. (New York: Wilfred Funk, Inc., 1954), pp. 202-4.

condition. Learn how to handle them. Develop a fastidious, but not a fussy, choice. Work always towards good taste in their use. Train your ear for their harmonies.

We urge you not to take words for granted just because they have been part of your daily speech since childhood. You must examine them. Turn them over and over, and see the seal and superscription

A Master-Word Approach to Vocabulary*

James I. Brown

How would you like a way of getting acquainted with words, a thousand at a time?

A few minutes with each of the following fourteen words will help you master well over 14,000 words. These words, the most important in the language to speed you along a superhighway toward vocabulary and success, do even more. They furnish invaluable background for further word study and give you a technique, a master key, which has endless possibilities.

You see, most of our English words are not English at all, but borrowings from other languages. Eighty per cent of these borrowed words come to us from Latin and Greek and make up approximately sixty per cent of our language.

Since this is so, the most important of these classical elements offer amazingly useful short cuts to a bigger vocabulary. The words in the list at the end of this article contain twelve of the most important Latin roots, two of the most important Greek roots, and twenty of the most frequently used prefixes. Over 14,000 relatively common words, words of collegiate dictionary size, contain one or more of these elements (or an estimated 100,000 words of unabridged dictionary size).

Now, how put these words to work, converting them into keys to the meanings of thousands of related words?

First, look up each of the fourteen words in the dictionary, noticing the relationship between derivation and definition. For example, take the word "intermittent." Let's chop it in two and chase it back to its birthplace. The two halves you come up with are a Latin prefix "inter-," which means "among" or "between," and a root word "mittere," which to a Roman meant "to send." "To send between!"

That does it. That drags the ghosts out of the Latin closet and arranges their bones so you can tell what goes on. An *intermittent* sound is one that is "sent between" periods of silence. Maybe those Romans had something, when you dust away the cobwebs caused by a dislike of high-school Latin. Now compare that derivational meaning, "to send between," with the dictionary definition, "coming or going at intervals."

This step develops an understanding of the many relationships existing between derivation and definition, relationships from almost exact agreement—as with *prefix*, by derivation and definition meaning "to fix before,"—to varied extensions and restrictions of the derivational meaning.

Next, look up each prefix. When you look up "pre-," for example, you'll find five somewhat different specific meanings, all denoting priority—priority in time, space, or rank. The dictionary entry will fix those meanings in mind and will often indicate assimilative changes.

* James I. Brown, *Efficient Reading* (Boston: D. C. Heath & Co., 1952), pp. 117-18.

Let's take an example. The Latin term *spectare* which means "to see" contains the root *spec*, and from this one root have sprouted more than 240 English words. We find the root hidden in such words as *spectacles*, those things you "see" through; in *respect*, the tribute you give to a person you care to "see" again; *inspect*, "to see" into; *disrespect* (*dis*—unwilling; *re*—again; *spec*—to see) therefore, when you treat someone with disrespect, you make it plain that you do not care to see him again; *introspection*, looking or seeing within; *spectator*, one who "sees" or watches.

Turning to the Greek language, which has so largely enriched our own, we discover the root appearing in English as *graph*. This means "to write" and has been a prolific source of words for us. We have *telegraph*, which literally means "far writing"; *phonograph*, "sound-writing"; *photograph*, "light-writing"; *steno-grapher*, one who does "condensed writing"; a *graphic* description, one that is just as clear and effective as though it had been written down; *mimeograph*, "to write a copy or imitation."

We have in our language a host of roots such as these. There is the Latin *spirare*, meaning "to blow or breathe," from which we get such English words as *inspire* (breathe into); *expire* (breathe out); *perspire* (breathe through); *respiration* (breathing again or often). And there is also our word "liable" that comes from the Latin *ligare*, "to bind." This fascinating root *lig* has branched out into *oblige* and *obligate* (to bind to do something); *ligature* (bandage or binding); *ligament* (something that ties two things together); and, with the root no longer so obvious, "league" (those nations or other organizations that are bound together); and even

the word "ally" which is from *ad* and *ligare*, to bind to one another.

These, then, are the branches. We turn now to the leaves. If the roots are the origins of words and the branches are the word families that stem out of them, the leaves of this language tree would be the words themselves and their meanings.

Each given word, in its beginning, had, no doubt, only one meaning. But words are so full of life that they are continually sprouting the green shoots of new meanings.

Shall we choose just one word as an instance of the amazing vitality of language? The simple three letter word *run*, up to this moment of writing, has more than 90 dictionary definitions. There is the *run* in your stocking and the *run* on the bank and a *run* in baseball. The clock may *run* down but you *run* up a bill. Colors *run*. You may *run* a race or *run* a business or you may have the *run* of the mill, or, quite different, the *run* of the house when you get the *run* of things. And this little dynamic word, we can assure you, is not yet through with its varied career.

Is it any wonder that our unabridged dictionaries contain as many as 600,000 living and usable words, words sparkling with life, prolific in their breeding, luxuriant in their growth, continually shifting and changing in their meanings?

Words even have definite personalities and characters. They can be sweet, sour, discordant, musical. They can be sweet or acid; soft or sharp; hostile or friendly.

From this time on, as we enter our word studies, try to become self-conscious about words. Look at them, if possible, with the fresh eyes of one who is seeing them for the first time. If we have persuaded you to do this, you will then be on the way to the success that can be won with a more powerful vocabulary.

classical elements. Yours is the magic touchstone, curiosity about derivations, which will bring words to life and lead you eventually to an awareness and understanding of words reached by relatively few.

THE FOURTEEN WORDS

Derivations as Keys to the Meaning of over 14,000 Words

Words	Prefix	Common Meaning	Root	Common Meaning
1. <i>Precept</i>	pre-	before	capere	take, seize
2. <i>Detain</i>	de-	away, from	tenere	hold, have
3. <i>Intermittent</i>	inter-	between	mittere	send
4. <i>Offer</i>	ob-	against	ferre	bear, carry
5. <i>Insist</i>	in-	into	stare	stand
6. <i>Monograph</i>	mono-	alone, one	graphein	write
7. <i>Epilogue</i>	epi-	upon	legein	say, study of
8. <i>Aspect</i>	ad-	to, towards	specere	see
9. <i>Uncomplicated</i>	un-	not	plcare	fold
10. <i>Nonextended</i>	com-	together with		
	non-	not	tendere	stretch
	ex-	out of		
11. <i>Reproduction</i>	re-	back, again	ducere	lead
	pro-	forward		
12. <i>Indisposed</i>	in-	not	ponere	put, place
	dis-	apart from		
13. <i>Oversufficient</i>	over-	above	facere	make, do
	sub-	under		
14. <i>Mistranscribe</i>	mis-	wrong	scribere	write
	trans-	across, beyond		

V

Emotional Factors in Reading Improvement

EMOTIONAL FACTORS

Emotional factors play a major role in reading difficulties. Emotional problems may be the cause of reading deficiencies. Reading deficiencies may cause emotional problems. When emotional problems develop in relation to reading difficulty, the proverbial "vicious circle" begins to operate and the individual frequently shows undesirable changes in personality traits and in social adjustment.

Reading deficiencies due to emotional factors have their beginnings more frequently in the elementary school grades than at the higher school levels and are more frequent in children who are above average in intelligence. There are more deficient readers among boys than among girls. That more boys than girls are deficient readers has been explained, in part, by pointing out that boys develop more slowly than girls physiologically, socially and linguistically. The activities, interests, and the social and family control of girls in their pre-school days and in their out-of-school hours are such that more attention of girls than boys is directed into channels conducive to reading. Another reason is that the masculine ideal excludes submission—submission to imposed regulation and performance, be it to cleanliness, assistance to parents, or to the task of learning assignments in studies, including reading. Approval of girls by parents or teachers as good readers accompanied by disapproval of boys of the same age frequently leads boys to have a highly emotionalized negative attitude toward reading as a "sissy activity." This situation is often clearly pronounced in cases of twins of opposite sex.

The deficient reader is below grade level as measured by standardized reading tests and as judged by teachers, but is frequently above grade level as measured by non-verbal standardized intelligence tests if the reading deficiency is due to emotional factors. He is classified as a deficient reader and soon learns that he is so classified. Disapproval of his status by parents or teachers frequently results in a highly emotionalized negative attitude toward reading.

Since the importance of being a good reader is stressed in the classroom, his sensitivity to his deficiency may become sharper, and thus the emotional factor and the reading factor become one. If his unsatisfactory efforts to read are met by reproval when he wants the encouragement that comes with approval, he feels that his group status is in jeopardy. This feeling is intensified when a good reader in his class reminds him derisively that he is in reading group three of the class, which is made up of the poorer readers in his third grade. In the next grade, he is reminded that he has been in the poorest group of the class for two years and may not be promoted. In the fifth grade, some of his classmates accuse him of being "dumb." In the sixth grade, a test of his vision results in a report that vision is only slightly below normal but that glasses will aid in the reading deficiency. In the seventh grade, he is sent to the principal's office frequently because of activities he felt a compulsion to substitute for efforts in reading assignments. While in the eighth grade, he hears his parents worrying for fear he will not be able to go to

college. In high school, he is scheduled for classes in shop, mechanical drawing, and driver training, because of low reading ability and in spite of good intelligence.

The need is imperative for recognizing and understanding the emotional factors in relation to success in reading. Recognition and understanding by teachers and parents must precede correction. Beulah Ephron, in her volume *Emotional Difficulties in Reading*, recommends that the problem be approached by using a list of well-known causes of individualized emotional problems. She offers rather convincing evidence that fear has become the major retarding force, although the pupil is not aware of a condition of fear. In fact, fear is not evident to the casual observer. Several layers of insulation may conceal the imbedded fear. The insulating coatings may be stubbornness, timidity, defiance, anger, feigned illness, or tears. In some cases, some psychosomatic factors such as rash, asthma, headaches, or nausea may result when the individual is called upon to make a good showing in the reading act. Often the underlying cause is fear of failure, fear of loss of prestige, fear of criticism. "The individual himself does not sense these as specific fears. He is aware only of a vague anxiety, emotional, and sometimes physical, discomfort, feelings of helplessness, bewilderment, lack of self-confidence, and other signals of deep distress."

Use of punishment, coercion, censure, reproof, and the like as attempted means of removing these reading deficiencies only serves to complicate the problem. The development of an understanding by the teacher of the causes and nature of the difficulty should be followed by creating pupil confidence and willingness to cooperate. The wise teacher provides for successes until a success pattern is formed. Fears are sublimated. Intelligence is given recognition. Confidence in self increases. Personality improves. Word attack methods become interesting. Vocabulary grows. Reading skills function. The printed page is accepted as a source of satisfying experiences.

What Research Says About Emotional Factors in Retardation in Reading*

Helena H. Zolkos

Failure in reading has frequently been associated with emotional problems, and, in turn, emotional problems have been attributed to reading failure or reading difficulty. In the controversy over the relation between school failure and emotional and social adjustment, disagreement persists on the question of what is cause and what is effect.

In many cases, intense emotional strain and reading disability seem to interact, each adding stress to the other. Rose S. Hardwick concluded that, if reading disability is caused by a basic personality problem, the problem must be solved before effective reading can be done. Conversely, should the reading failure cause the emotional strain, the reading pressure must be lessened to clear up the emotional disturbance.

Clinicians have usually considered that the emotional maladjustment produces the reading difficulty. Other investigators have claimed that the unsocial and disturbed behavior of the individual is the result of frustrations, tensions, stress, and strain associated with failure. Remedial specialists have recognized personality disturbances that accompany reading disability and have realized that, at times, therapy must be administered before correction of the reading difficulty can take place.

Only too frequently teachers have placed too much emphasis on new devices and on varied and new techniques in trying to solve the retarded reader's problem. They have given little thought to the fact that the reading problem is definitely related to the wholesome adjustment of the child—first, to himself, and, second, to his environment. Progress will be made when teachers learn how to study, and to become well acquainted with, the total development of the child. The child's physical, social, emotional, and intellectual growth and development are closely related to his behavior and progress in the learning situation.

FACTORS AFFECTING READING

Although reading material is static at all times, the child is dynamic and constantly changing. Reading calls to action the whole organism, and, whenever the equilibrium of the organism is disturbed by emotional, physical, or social handicaps, reading efficiency may be greatly reduced.

Fundamental needs. The roots of many problems stem from emotional, social, or physical immaturity. They are symptoms of unmet needs.

Frequently, neither the home nor the school gives the child the adequate sense of security that is fundamental for emotional stability. Emotional disturbances in

* *Elementary School Journal*, LII (May, 1951), 512-18.

the home can deaden the child's desire to learn to read.

One of the fundamental needs of every child is proper, satisfying social adjustment and recognition. Not only must the child be accepted by the immediate society of which he is a member, but he must also accept himself. He must be both a desired and a desirable member of the group.

Another fundamental need that is closely related to the child's social and emotional maturity is that of competency. At no time should a child be made to feel incompetent in learning to read. Although the child may lack the ability to read as effectively as his classmates, he should experience a sense of satisfactory accomplishment by tasting a degree of success at his own reading level. To give him success, the teacher must provide reading material that is appropriate to his abilities.

Overprotection. An overprotected child can never arrive at a realistic understanding of himself. He is unable to stand on his own two feet and to meet new circumstances with self-confidence. The overprotected child frequently has a reading difficulty; for, in the reading process, there is no prop for support, and the element of initiative is sadly lacking. Under these circumstances, the child can react in one of two ways. He can act indifferent toward the reading process and use an escape mechanism to shut himself off from it, or he can establish a belligerent attitude toward reading. He can establish a mental block against reading, or he can become defiant and aggressive.

Influence of environment. A lush environment, from the point of view of child development, will have in it a variety of experiences and many degrees of difficulty in material or experiences of the same type. Since each child's pattern of growth is individual, he is stronger in some capacities than in others. In addition, the child's variety of experiences has produced for him different associations with different words. The child who has had a

background of rich, varied, and pleasant experiences in all probability has also had pleasant associations with words. For him, learning to read will be a quick and pleasant task. On the other hand, the child with a limited background of experiences, who has had unpleasant or indifferent associations with words, is more likely to find reading a difficult and unsatisfying experience. Because his past experience with words has been unpleasant, a mental block against words has been established, and, until that block is removed, learning to read will not take place.

For example, words with accompanying pictures, classified as "pleasant," "indifferent," or "unpleasant," were selected by Harold Carter and presented to children. Later he studied the recall of words when the pictures were shown and found that pleasant words were learned better than unpleasant or indifferent words. Unpleasant words were learned better than indifferent ones. Carter noted a tendency to replace unpleasant and indifferent words with incorrect pleasant words. His study showed that pleasantness of association may be directly related to the rate of word-learning.

Results of failure. Difficulty or failure in learning to read may lead to such a degree of fear-conditioning that the sight of reading material causes a disorganized emotional response which further inhibits concentration, perseverance, and motivation. Emotional tension may cause reading difficulty and failure when the subject is first presented. Repeated failure may result in frustration, and the continual persistence of failure strengthens the frustration, leading to emotional maladjustment and complete discouragement and failure in the reading process.

The emotional and personality problems of the psychopathic or neurotic child are plainly evident. However, many minor adjustments which every child must make when he enters school, combined with immaturity, lack of self-confidence and of

security, previous experiences with words, and timidity—any or all of these may hamper his willingness to learn to read. It is necessary, therefore, to establish rapport between the teacher and pupil during each and every learning situation so that the first steps in learning to read do not lead to frustrations and emotional tension. The results of failure to learn to read have been numerous and undesirable. Among them are social maladjustment, delinquency, and even crime.

SPECIFIC STUDIES

In a study of reading retardation at the Educational Clinic of Boston University, it was found that 200, or 39 per cent, of the 517 cases listed showed an emotional disturbance of some kind. Discouragement appeared in 26 per cent of the 200 cases; nervousness was next in frequency, occurring in 18 per cent of the cases. The only other category which occurred in more than 10 per cent of the cases was family trouble. Feelings of inferiority, insecurity, and lack of confidence together accounted for 19 per cent of the 200 cases showing emotional instability.

Since our present educational system depends largely on the tool of effective reading, the child who remains in school finds reading a primary requirement. The competent teacher is expected to present the reading material repeatedly, using every method or device which might help the child to learn to read. The child who is having difficulty and is experiencing failure at each new trial, however, may have many frustrations which eventually cause a sense of shame and a feeling of anxiety, followed by lack of interest, application, and motivation. Mandel Sherman recognized the development of defensive or aggressive response to failure, as well as a feeling of anxiety from which defensive reaction might stem.

Investigators have concluded that frustrations and their effect on learning are

significant. Edward L. Thorndike and Ella Woodyard reported frequent irritation and loss of interest when frustrations were experienced during the reading lesson. Fernald's view of the situation is as follows:

The blocking of voluntary action has long been recognized as one of the conditions that result in emotion. . . . The individual who fails constantly in those undertakings which seem to him of great importance and who is conscious of failure is in a chronic state of emotional upset.

Neurotic children have an unusually keen sense of feeling and sense intensely their failure to learn to read. They are inferior in their ability to co-operate, follow directions, concentrate, and apply themselves to a given task for any length of time. They should be referred to a psychiatrist before they attempt to read, or failure may well result.

Upon entering school, children are eager to learn to read and write and like to keep up with the progress of their classmates. They have the desire to learn, and, if that desire is thwarted, they develop emotional problems. Grace M. Fernald reported that, of seventy-eight cases of extreme reading disability treated in her clinic, only four entered with no history of emotional maladjustment. The extreme emotional reaction did not take place until after the child had experienced repeated difficulty and lack of success. This condition produces a deep-seated sense of inferiority in many children and kills any incentive to try to learn. Sometimes an aggressive, irritable personality develops, and the child tries to compensate for his inability to learn by the extra attention he receives from teachers and parents, who recognize him as different from other children.

The child who has experienced many frustrations in the learning process may appear to be lazy or indifferent. This may be caused by an unbalanced glandular condition, or it may be a "front" developed to cover the child's sense of inadequacy. If

the cause is not physical, his resistance to reading can be overcome under wise guidance, and his desire to learn to read can be successfully remotivated.

Donald Durrell found that many confusions take root when the immature child is exposed to the mechanics of reading before he is ready to cope with its complexities. This difficulty could be remedied with more efficient, thorough reading-readiness programs. Durrell stated:

"If the confusion produced by error leads to mental blocking, additional confusion, discouragement, withdrawal of attention, or to meaningless activity induced by fear of failure or ridicule, the child often stays on the learning plateau for a long time."

Arthur I. Gates, in a summary of his studies of emotional and personality problems in relation to reading disability, stated that emotional instability was found in about 75 per cent of retarded readers but that in only about 19 per cent of these cases was it found to be the specific cause of the reading disability. It was a contributing, but not necessarily the primary, cause.

Samuel A. Kirk listed the following personality traits as those which showed improvement with remedial teaching in high-grade mentally defective children whom he studied: inattentiveness, daydreaming, incorrigibility, negativism, and shyness.

Phyllis Blanchard reported that many children referred as reading failures were daydreamers, uninterested, bored, sensitive, absent-minded, and solitary. Unless socially acceptable compensations were developed along with the reading failure, personality and emotional problems arose. The emotional tension, combined with anxiety and misunderstanding, caused a resentful and antagonistic attitude toward help. In some instances, effective remedial help in reading was not enough to relieve intense emotional stress, and psychiatric treatment was necessary in order to pro-

duce satisfactory emotional and personality adjustment.

Simon H. Tulchin believed: "The more primary the emotional factors the greater the stumbling block in treatment. Also when emotional factors seem primary, disability and general lack of progress in other subjects as well as in reading is more likely to occur."

Edward H. Stullken found that 20 per cent of the boys who were behavior problems had severe reading difficulty and that 66 per cent were retarded in reading one year or more below their mental age. Through the study of statistical data, he concluded that reading disability was an important underlying factor in producing school maladjustment. He also found that effective remedial reading changed the attitude of the delinquent boy. When a boy had won success in his school work, he was less likely to make a bid for attention by participating in anti-social and delinquent behavior outside school.

Willard C. Olson is of the opinion that not only physiological and intellectual factors but also instinct, emotion, and social faiths are involved in learning. Emotions should be harnessed to constructive activities.

Thomas H. Eames found that malnutrition, infections, and endocrine disturbances are the three general physical factors mentioned most frequently as possible causes of failure to read.

MEETING THE PROBLEM

Teachers working with retarded readers should make every effort to accept these children without emotional reactions on their own part, to try to help them change their undesirable characteristics of behavior, and to encourage them to learn to read. Until teachers have acquainted themselves with the basic facts of child growth and development, we cannot expect to eliminate from the elementary school the great amount of poor reading done by pupils.

Such problems as those involving emotions and personality cannot be met adequately until more studies of the emotional

and psychological factors associated with the learning-to-read process have been made.

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Emotional Predispositions to Reading Difficulties*

Rudolph Dreikurs, M.D.

Reading difficulties are attributed to a variety of factors. During the last few years the emphasis has shifted from a mechanistic-physiological to an emotional-sociological interpretation of the factors involved. The orientation first mentioned considered primarily isolated physiological factors, assumed that "reading readiness" depended on the cerebral development of the child, on his intellectual development, on his motor coordination, on strephosymbolia, on left-handedness and other deficiencies. While such factors may undoubtedly have a deterrent influence on the learning process, their significance can only be determined within the total picture of each child.

Emotional and social dynamics play a major role in causing reading difficulties, as in most academic deficiencies. Every human being—and the child as well—is primarily a social being, a *zoon politicon* (Aristotle). Since he functions entirely within a social atmosphere, all his actions and performances have social significance. To understand a child requires comprehension of his total personality within his social setting. Without such comprehen-

sion, no diagnosis is possible as to the "causes" of his deficiencies.

A poor reader distinguishes himself in three ways from the adjusted child. First, he displays a disability; his accomplishments are far below par, both in comparison to others and to his own potentialities. The emotional blockings and faulty personality patterns underlying reading disabilities are similar to those found in dysfunctions of various other kinds.

Second, the retarded reader often has poor working habits. His efforts may be spotty, sporadic, and erratic. Poor working habits may result from inadequate training and indicate a deficient personality development.

Third, the retarded reader is limited in his cooperation with others. He often displays disdain and defiance of order. Therefore, reading difficulties may be based on disturbed inter-personal relationships with their consequent social and emotional maladjustment.

The steady increase of reading difficulties in our country indicates that certain cultural factors may affect adversely the training of children. Our parents seem to be unable, to a large extent, to promote healthy growth and development in their

* *National Association for Remedial Teaching News*, Vol. II, No. 4 (October, 1952), 1, 4.

children. Teachers too experience increasing obstacles in stimulating academic progress and social conformity in their pupils. Our educational techniques and approaches seem to warrant re-examination of some of their premises. This general predicament can be attributed to the change from an autocratic to a democratic social climate. The methods and values of an autocratic past have lost their efficacy in a society in which all are becoming equals. We have not learned yet to live with each other as equals, particularly not with our children. Most of our educational failures can be directly traced to our inability to treat the child as an equal and with due respect. Our vacillation between disrespecting the child through over-protection or humiliation and yielding to his undue demands creates confusion, defeatism and hostility in the educator and evokes defiance and non-cooperation in our children. This setting explains some of the social and emotional conflicts of the child which cause his reading difficulties, and constitute his "disability," poor working habits, and limited cooperation.

Some of the characteristic conflicts in children with reading difficulties are:

1. The child's disability is not caused by any one physiological handicap but primarily by lack of confidence in himself. As long as he is not discouraged, he can use his inner potentialities. Many children are exposed to a sequence of discouraging experiences, first on the part of their parents and then through their teachers. They cannot develop their inner resources and abilities if their guardians do not believe in them. Over-solicitude and over-protection deprive the child of the vital experiences of his own strength, and corrective measures often have a further discouraging effect, as they evoke humiliation.

The receptiveness of our children to discouragement is enhanced by the cultural pressure toward prestige and personal glory. A competitive atmosphere impresses the child with the conviction that he is not

good enough as he is. To be better than others, or—if possible—to be the best, is most desirable. Ambition does not increase the ability to perform, but often enough jeopardizes it. Over-ambition leads to easy withdrawal whenever excellence is impossible. Enthusiasm and the joy of doing things produce far better and more reliable results. Ambition, the concern with prestige, is a distorted motivation; if frustrated, no motivation is left, and this lack of motivation is often responsible for a child's disability.

2. Many academic deficiencies are the result of poor working habits. Children who look merely for gratification, for fun, are not trained to work or to benefit from it. They are not raised to be useful, as long as everything is done for them. We are raising a generation of pampered and over-protected children who try to get as much as possible by doing as little as possible. This over-protection tends to make the child demand service instead of doing things for himself and for others. Work does not appear as pleasure, but as defeat and submission. The distaste for work within the family may affect all work. A great number of our children resent any obligation to do anything except play and have fun. This tendency is even more pronounced in boys since the masculine ideal excludes submission, be it to cleanliness, to domestic assistance, or even learning; it all appears as "sissy stuff." This attitude of boys may explain their greater number among the poor readers.

3. Negative attitudes toward work are part of a child's mistaken concept of order and cooperation. His academic progress as well as his social adjustment becomes impaired. Reading and writing are the two subjects mostly affected by the child's reluctance to accept rules and to conform.

In our transitional period between autocracy and democracy, the problem of order becomes confusing to adults and children. In an autocracy, order meant submission; in a democracy it requires self-

determination. Freedom and order are mutually exclusive in an authoritarian society, but synonymous in a democracy. Democracy does not give the license to do as one pleases, since freedom is impossible without the respect for the freedom of others. Democratic order requires regard for the interest of all. Our parents are ill-prepared to present this new type of order to the child. Only if they could establish a relationship of equals could they raise children in freedom and with respect for the necessary order.

The teacher faces the same task of winning the child's cooperation. Failing to do so, she exerts pressure which intensifies the child's rebellion, be it expressed openly or by mere passive resistance. Most remedial reading teachers encounter both types of rebellion. "Making" the child repeat his assignment until he finally may learn is not designed to get better cooperation.

Besides the general cultural pattern, certain personality trends in the child may contribute to reading difficulties. Without understanding the individual child in his motivations and dynamics, the teacher cannot deal effectively with his deficiencies. Some teachers have an instinctive "understanding" of children, through their empathy, their "feeling" for them; but the training of teachers generally provides little practical psychology which can be applied in the classroom. Neither the traditional assumption of constitutional or hereditary deficiencies, nor the recent instinctual-biological theories of psychoanalysis provide the teacher with a practical scheme for an understanding of the individual child.

The socio-teleological approach to human behavior promises greater assistance to the teacher. Since it implies that human behavior is purposive and goal-directed, this approach permits a recognition of the child's goals underlying his deficiencies or his disturbing behavior. Through understanding the child's goals, the teacher has

access to his total personality, to his inner motivations. All disturbing behavior reflects erroneous goals which the child has set for himself. Reading difficulties, like any other deficient behavior, serve one of these goals, be it (1) a bid for attention, (2) the demonstration of power, (3) taking revenge, or (4) displaying inability as an excuse. The child is not aware of his goals, of the use to which he puts his deficiency.

Many children use their "inability to read" to get special attention and service. Many retarded readers are in a power contest with their parents, defeating their efforts through passive resistance. The "inability to learn" may also defeat an ambitious teacher who tries to overpower the child. Refusal to read as a means of revenge is not too frequent; it may be found in children of highly educated and ambitious parents, whom they can punish for their own hurt feelings by failing academically. By far the most reading difficulties serve goal four. The child is so discouraged that he gives up all hope of ever learning. He tries to convince himself and others that he cannot do it so that they should not demand anything of him. Very often a successful sibling is the cause of this discouragement.

A teacher who does not recognize the child's goals is prone to submit to them, thereby fortifying them, instead of changing them.

Corrective measures should not be limited to the area of deficiency, but should be applied to the larger issues and the psychological dynamics underlying this deficiency. The teacher cannot ignore the faulty values of the child, his mistaken self-concepts, and erroneous approaches. Efforts to change them should become the essence of remedial teaching. Individual and particularly group discussions can successfully influence children in changing their values and concepts.

Effective educational endeavors require the establishment of proper inter-personal relationships. Only through firmness and kindness can mutual respect be achieved.

Encouragement is the keynote to any remedial procedure. Pressure can no longer provide a proper motivation in a democratic climate. Remedial teaching must evoke the interest and enthusiasm of a child, and, therefore, have practical meaning and value for him. If the reading material is not applicable to the child's daily

life, it cannot be interesting and vital to him.

The remedial teacher has the chance and obligation to remove emotional blocks and other sources of the child's discouragement. In this way remedial reading takes on the aspect of therapy, once the reading difficulty is recognized as a symptom of a deeper emotional disturbance. This inevitably will help the child in his general development, in his growth and social adjustment.

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Emotional Blocks in Reading*

Worth J. Osburn

Thirty years ago, we did not often discuss problems of the sort implied in the title of this article. Then we were interested in an intensive study of reading as such. We finished that job rather well only to find that the reading problem was still far from a complete solution.

In our zest for intensive research, we somehow lost sight of the fact that reading, or indeed anything, does not exist in a watertight compartment. Warned by the rise of the organism-as-a-whole movement in psychology, we turned our attention from reading as an intellectual pursuit and began to study the reader. We found that the intellect, the emotions, and the body have little meaning when studied alone. Whatever takes place in one of these is strongly conditioned by what goes on in the other two. We have also learned that we are living in a world of four, instead of three, dimensions. When we came to

study the reader, we found that we were compelled to deal with processes and movements in time as well as in space. After a rather lengthy study of the water behind the dam, we are now compelled to study the entire river.

The purpose of this article is to describe in a small way how the river flows (or fails to flow) in the process through which a child learns to read. The data come from the records of the Summer Educational Clinic of the University of Washington for a period of six years extending from 1943 to 1948, inclusive. Each summer, in my classes in experimental and remedial education, I ask for students who would like to earn part of their class credit by teaching a problem child in reading. The volunteers have all had previous experience in teaching. For seven weeks, each spends one hour a day, five days a week with a single pupil.

In the beginning, we had only a few pupils from homes in the immediate

* *Elementary School Journal*, LII (September, 1951), 23-30.

neighborhood. We did not dare to advertise for pupils for fear of getting too many. Even so, the news was spread that we were running a clinic. After six years, we had so many applicants that screening tests became necessary. The data included here were obtained previous to the institution of the screening tests. They will be considered in terms of origin, diagnosis, and treatment.

ORIGIN OF EMOTIONAL BLOCKS

Emotional blocks grow out of interruptions and frustrations. These interruptions and frustrations may be caused by obstacles, such as avalanches and log jams, or by the meeting of opposing currents, as when a rapidly flowing river meets with a tidal wave in the sea. Let us look at some of these obstacles and opposing currents which give rise to emotional blocks in reading.

We assume that all children possess life-forces which require exercise and activity. We assume also that the exercise and activity must take place along with similar exercise and activity among other children. This is the old Froebelian idea of "self-realization through social participation." Little children come to school hopeful of learning to read. Most of them do learn, but many do not.

At the end of the year, everyone is usually promoted, because of the mistaken notion that membership in a certain fixed social group is all-important. Day after day, month after month, year after year, the retarded child is *denied* participation in his group because he cannot, or does not, learn to read. He is *in* his group but not *of* it, the most cruel segregation of all. Thus, the proponents of social promotion most powerfully augment the evil that they are try-

(3) lack of visual discrimination, (4) previous illness, (5) adverse home conditions, and (6) speech defects.

"Lack of auditory discrimination," in general, means inability to associate letter sounds and symbols. Under "Other lack of readiness," we group all those children (approximately one out of five) who were forced to try to read before they had achieved sufficient reading readiness as measured by several well-known standard tests. "Lack of visual discrimination" includes poor eyesight and, particularly, poor eye fusion. "Previous illness" involves those children who have lost large amounts of time in school because of illness. "Adverse home conditions" includes broken homes, instances in which the mother works away from home, fatigue and sleepiness caused by late hours, insecurity, malnutrition, and general neglect. These are the primary factors. Most of them are not emotional in character, but all of them go to make up the soil from which emotional blocks grow.

SECONDARY FACTORS

The factors here called "secondary" are so named because they follow those which we have called primary. They center in the disturbance in the home that results from the inability of some of its members to succeed in their school work. Few parents are aware of the existence of the primary factors which have been described. They do not know that auditory discrimination develops slowly in some pupils. No one has ever explained to them the fact that every child must somehow learn to associate sounds and symbols. Bred into the very bones of our people is the belief that all men are created equal. Therefore, if *most* pupils are able to learn to read at the

the failure of her son in Grade I, in spite of the fact that, for five of his six years, all his energies had been required just to stay alive.

Nevertheless, some sort of explanation is necessary when one's child fails in school. Parents have to fall back, therefore, on the erroneous popular hypotheses of (1) the teacher is inferior, (2) "the kid is dumb," or (3) the child does not and will not study. A little investigation usually shows that the teacher is not inferior. He may be succeeding quite well with all but this particular child. The second explanation is horrible to parents. They will not believe that such a thing could happen to them. Thus, they assume that their trouble is caused by the child's unwillingness to "apply himself," and they set to work to remedy this condition.

They point out that his sister or brother did not have trouble in learning to read. His playmate across the street has the same teacher and is doing splendidly. They nag the retarded child day in and day out. The child never sees a smile on the faces of his parents when they are looking at him, but there are plenty of smiles for his brother or sister. The parents are likely to deprive the bewildered child of privileges or toys. Some parents go so far as to administer corporal punishment. When company comes, especially school officials, the parents parade the shortcomings of the child right in his presence and "pull no punches" in showing their disgust with him. One mother brought her retarded child to us and said, "I've got one child in high school who is smart. This one is 'nuts.'"

While most parents are unable to bring themselves to admit that they have a "dumb" child, the neighbors and playmates of the pupil have no such inhibitions. With all the candor of childhood, they tell him that he "sure is dumb." He desirable social status among them. Such cannot command their respect and has no

are the secondary factors in reading disability.

TERTIARY FACTORS

The tertiary factors are evidenced in the child's reaction to the cruel situation in which he finds himself. The child's morale is always ruined. Some children say, "I could read if I wanted to, but I don't like reading." Some say, "Don't waste your time trying to teach me to read. I can't learn." Others try to compress themselves down into their clothing; still others try to slide under the table. Many of them show evidence of shyness, sensitiveness, and nervousness. Some are sullen and defiant; others show stark fear.

In school and neighborhood situations, the more overt retarded pupils compensate by acting the "smart aleck," or they may seek revenge for their unhappy condition by "getting even" with the teacher and with their successful playmates. They are the so-called "bad" boys and girls. Swearing, lying, and stealing are also convenient forms of compensation. Thus, for the extrovert, school retardation leads toward prison. The introvert type gives the teacher little trouble. He rolls up around his troubles and stews. He, too, may compensate by building a dream world in which he finds escape for himself. He may wind up in a mental sanitarium later.

DIAGNOSIS

So far as we know, it is impossible to teach a child who is suffering seriously from the type of emotional blocks which have been described. If the school is to help these tragic children to a better adjustment, they should be located as quickly as possible. This calls for diagnosis. Of course, any child who is two or more years retarded has been subjected to frustration for that long. Going to school is the child's business. If he fails, the results are likely to be as serious to him as failure in business would be to his father. Any experi-

ence of this kind is enough to cause a more or less serious nervous upheaval and block.

Since we need more information, we use tests and interviews. Because there is such widespread lack of auditory training, we start with it. We ask the pupils in a group to spell the following words: *stick, song, bat, tent, cans, stars, pot, bar, cakes, pad, nuts, rushed, still, reach, send* and *wet*. These words contain the phonetic elements which occur most frequently in the kindergarten word list. If the child uses incorrect letters for half the sounds, we assume that he has a serious emotional block. We ask each child to read orally on several grade levels, in order to locate the level at which he can read with from two to five errors a hundred words. If that level is two or more years below his normal grade level, we assume that he has an emotional block. We give simple story problems selected from the Wisconsin Inventory Tests, No. 11. If the child does not know whether to add, subtract, multiply, or divide, we again assume that he has an emotional block. If there is a decided tendency to miscall small words, we use the Betts telebinocular and usually find that the child has poor eye fusion. We inquire into the child's previous health record. So much, in brief, for the tests of the primary factors.

For a line on tertiary factors, we have the pupil write or tell what he would do if he possessed a "magic coat," which he could put on and make himself invisible. If he says that he would rob the bank, blow up the schoolhouse, and kill the principal or teacher, we assume emotional maladjustment. We have obtained significant results also from the assignment: "Play that you have an imaginary brother [or sister if the pupil is a girl]. Your brother is thinking of running away from home [or school]. Tell why he is thinking of running away." A story on "Things That Make Me Angry" sometimes throws interesting light on a child's problems.

To understand the secondary factors in a given case requires interviews with both parents and children. I enroll as many parents as possible in a class that is offered at the University City Center for six weeks preceding each clinic session. I present to them these factors, any one of which can produce maladjustment in a child, and advise them that there is no point in worrying about their child's intelligence until all these factors have been investigated. Much time is allowed for discussion. I simply listen to what is said and learn much that is useful in dealing with the children. Incidentally, attendance at such a class has marked therapeutic value for the parents. They learn that their worst fears are groundless, and they get acquainted with other parents who have similar problem children.

Even more important are the interviews which the clinic teacher has with his pupil. These teachers are warned that they will have a pupil who has lost hope, one who is badly in need of respect, kindness, and polite treatment. The teacher says little to his pupil about reading for several days. His main task is to get acquainted with his pupil. Polite treatment soon begets friendship and confidence.

Little by little, the child begins to tell his story. Much of it is insignificant, but occasionally there emerge significant items for which the teacher has been trained to listen. Perhaps the mother is an idealist who is satisfied with nothing short of perfection. The father may be overambitious and domineering, like one father who wanted to make an expert flutist out of his son when the boy's ardent interest centered in "hot rods." The child may think that his parents do not love him. He may be worried because his father is too busy to devote any attention to him. A father may be jealous of his child. Often the child is jealous of his more successful brothers or sisters. He may be greatly disturbed because of a broken home or by incessant quarreling between his parents. He may

be upset because his playmates hate him. Worst of all is the deep feeling of "I am dumb." Any of these things, whether true or fancied, can be enough to block the pupil's ability to study and learn. By means of friendly interviews, it is usually possible for each clinic teacher to discover the essential information concerning his "problem child."

TREATMENT

The treatment for emotional maladjustment among children is still in its infancy. Our only recourse seems to be to formulate the best possible hypotheses, use them as bases for treatment, and study the results. Just now our best results are coming from a hypothesis derived partly from Freud and partly from general semantics. We assume that retardation, plus pressure from home and school, can cause trauma, lesions, or nests of semantic poison in the child's brain. Whatever we may name the brain injuries, the object, of course, is cure or removal. In general, two methods have been suggested.

The encasement method. I shall mention first the "encasement" method. It is assumed that it is possible to wall off the semantic-poison pocket in much the same way as an inflamed tubercle can be walled off in a tubercular lung. For example, when the trouble centers in reading, we avoid reading, as such, and look for something that the pupil can learn to do well. The all-important thing is to find something in which he can excel, so that he can build up his self-respect and thus command the respect of others. Sometimes a pathetically small amount of success will be sufficient. One teacher broke the emotional block in a little boy by teaching him to hop. Another teacher aroused his pupil's interest in freehand lettering. As soon as the pupil achieved some success in that art, he said, "Now I can do something that sister can't do." Some of the men teachers find that success in baseball or other types of athletics will break an emotional block.

Achievement in music, drawing, and manual arts has proved effective in some cases. In short, the essence of the encasement treatment is to find something that interests the pupil and to teach him to do that thing with more-than-average success. When this has been done, the block is broken, morale is restored, and the child can be taught by ordinary methods.

Few of our pupils are complete non-readers. They soon find that they can read material on the lower levels. Among even the worst cases of retardation, we have found that we can get the children to tell a story, while the teacher takes it down, and have them read it back the next day. With a little rehearsal, such a child can often go before his class and "read" his story. Thus, he can forever refute their comments about his being too "dumb" to learn to read.

We impress each pupil and his parents with the fact that his trouble is due to one of the primary factors. For example, if his trouble is caused largely by lack of ear training (in most cases it is), we commence with exercises of that sort. We keep an accurate record of all improvement. When the pupil learns a sound, we give him a card to take home so that he may demonstrate his progress. We have found that one of the most useful morale-builders with many pupils is increase in rate of reading. The material read must be free from any word that could prove difficult to recognize. Rate records in words per minute are taken each day, and the total record is plotted on graph paper so that the pupil can see and demonstrate the amount of his improvement. In short, we use every legitimate means of bringing success to these neglected pupils.

The cathartic method. The second approach to the treatment of emotional blocks is known as the "cathartic" method. It is based on the hypothesis that, if there is semantic poison in the brain, the thing to do is to purge or burn it out. The method is described in detail by Virginia

Mae Axline in *Play Therapy* and by Madeleine Rambert in *Children in Conflict*, but these writers are applying the treatment to pupils younger than those who come to us. With our pupils, nondirective therapy has proved more useful. We have found also that the child can "talk out" his semantic poison in his "Magic Coat" and "Why My Brother Is Running Away" stories, which have been described previously. The pupil's day-by-day talks with his teacher are, most of all, a means of relieving him of his poisonous ideas.

Sometimes the removal of a block is almost spectacular. A log jam in a river can often be broken by the removal of the key log. Then the obstruction goes thundering by quickly. Sometimes emotional blocks behave in a similar manner. This is evidenced by the profound and tearful relief which some mothers show when they are told that we know what has caused their children's trouble and that it is not lack of intelligence or "gremlins." We give a scientific reason for the children's difficulties and equip these mothers with a bit of scientific vocabulary with which to account for their children's condition to their friends and neighbors. We also assure them, as forcefully as we conscientiously can, that we know how to take care of the difficulties. In such cases, these women's sickening worries seem to vanish into thin air, as if removed by a magician's wand. We have also had similar results with the children themselves.

Psychodrama. There is a third approach to the problem of emotional blocks that has interesting possibilities. The medium is psychodrama. Psychodrama involves features of both encasement and catharsis. We have not used this approach in the clinic because it is social in nature and requires an audience. We have, how-

ever, done some experimenting in local schools.

A cast of players is selected, and they, in turn, select some type of unacceptable behavior and dramatize it before the rest of the class. For example, if there is a "smart aleck" in the room, he is selected to play the leading role in a drama in which he must portray the qualities of the "smart aleck" at their best from his point of view. The audience furnishes the dramatic criticism and points out, if possible, chances that he missed to be more successful in his role. Perhaps other children are selected for the roles, and the play is repeated.

It is assumed that a child who feels the need of "showing off" is one who is frustrated in some normal area of self-realization. In acting a show-off role, his performance becomes approved. This purges or drains off his emotional tension and enables him to achieve social recognition. His show-off tendencies are thus conditioned to role-acting at a specific time. Thus, his tendencies in that direction at undesirable times are inhibited (encased). Our results with psychodrama have been favorable thus far.

RÉSUMÉ

Emotional blocks are best understood by studying the series of processes of which they are a part. They are the results of frustrations caused either by static conditions or by opposing forces. In either case, the treatment is much the same. The series of which emotional blocks are a part has been described in terms of primary, secondary, and tertiary factors. Techniques of diagnosis and treatment used in the clinical services at the University of Washington have also been described. Useful methods of treatment are encasement, catharsis, and psychodrama.

Preadolescent Behavior Patterns Suggestive of Emotional Malfunctioning*

Robert F. Topp

Children suffering from temporary or persistent abnormal emotional conditions are neither happy nor productive in school or elsewhere. But teachers have been slow to take on responsibility for the mental health of their pupils. There are good reasons for this apparent neglect, among which are the overload of unavoidable duties related to subject-matter achievement and the overload in the number of children to be handled.

Recognition of embryonic emotional disorders in preadolescent children is an essential early step in any teacher's informal mental-hygiene program. Teachers should be prepared to identify symptoms of emotional trouble just as they are now observant of physical illnesses among their pupils. Innumerable examples could be given in which teachers were the first to recognize serious physical illnesses and, by their alertness, prevented the development of conditions dangerous to the lives of the children concerned. There is no reason why teachers could not also help in the same way in the prevention of chronic emotional illnesses.

Every teacher who does his job well cannot fail to note evidences of maladjustment in some of his pupils. What is more, if he is meeting his obligations to his pupils and to society, he will do all in

his power to see that any such child receives remedial attention. It goes without saying that the conscientious teacher will do his utmost to provide the student with a school environment and experiences that will encourage sound mental health.

Consequently, because the teacher is unavoidably having a psychological effect of some nature on his pupils, he should be aware of some of the early signs of malfunctioning and of the proper action to take when the signs are noted. He will not be expected, or permitted, to diagnose such conditions; his duties in this regard will be restricted to recognizing general manifestations of behavior that set the emotionally troubled child apart from normal children of his age, referring the child to the parent or to the school psychologist, and carrying out the recommendations of the expert who is consulted.

With the purpose of setting down some of the observable behavior patterns which maladjusted preadolescent children display, the writer conducted a study in 1949 wherein twenty-five experienced child psychologists and psychiatrists were asked to evaluate selected described behavior patterns. Agreement among the jury members was sufficiently high on many of the patterns to justify the conclusion that they were of significance if observed in preadolescent children, provided the patterns

* *Elementary School Journal*, LII (February, 1952), 340-43.

were present in sufficient number and in meaningful combination.

Before the behavior descriptions are presented, it is important to emphasize that no single pattern is important when viewed by itself. Only when several patterns are observable in a child and when these seem to fit into a "personality picture," with inner agreement among behavior manifestations, can it be said that the behavior descriptions are significant. In addition, through wide opportunity to observe each child in a variety of situations, the teacher will possess supplementary information that will tend to reinforce the possible conclusion that a child is in need of attention. It goes without saying that the ethics of teacher-pupil relationships should be strictly adhered to and that any informal or formal evaluation of the child should be maintained in complete confidence.

According to twenty-one or more of the twenty-five child psychiatrists, the following behavior patterns, if combined with other reinforcing evidence, can be said to indicate to the teacher that a child is in need of careful study and perhaps of referral to an expert in child psychology.

Behaviors To Watch For

1. Flies into fits of anger on slight provocation.
2. Shows signs of excessive "worriedness" and anxiety on such occasions as a school fire drill or a rehearsal for a play.
3. Frequently depressed in appearance; almost never smiling or joking with fellow-students.
4. Repeatedly steals small articles from fellow-students despite severe punishment.
5. Frequently appears to be lost in his daydreams.
6. Exhibits habitual facial grimaces, or tics, particularly when under slight emotional stress.
7. Although of adequate intellectual ability, cannot apply his ability to his work and, as a result, does an inferior

job. This is true despite the fact that he seems to be conscientiously trying.

8. Physically energetic and active to such a degree as to lack control over his actions; restless and practically unable to remain quiet even for short periods of time.
9. Very sensitive over real or imagined slights; feelings easily hurt.
10. Shows evidence of being excessively cruel to younger or smaller children or animals; enjoys seeing other creatures suffer.
11. Abnormally anxious to achieve perfection in any task; never late with an assignment, being much more concerned with perfection in work than most others his age.
12. Overconcerned about disease and germs; unusually clean physically for one of his age.
13. Shows evidence of disliking or hating most people, including his teachers and fellow-students.
14. Frequently expresses the idea that he is being singled out for punishment more often than others, when such is not the true state of affairs.
15. Lazy and irresponsible about completing any disagreeable or difficult task; must continually be urged to apply himself; shows little concern over failure.
16. Cannot avoid misbehaving, even though repeatedly warned and punished for identical activity on numerous earlier occasions.
17. Exhibits little or no affection for anybody whether it be his teachers, classmates, or other adults.
18. Has difficulty facing a task which others accept readily because he fears he cannot do it suitably; lacking in confidence.
19. If permitted to do so, "just sits" without seeking entertainment or activity of any sort; remains passive in this manner for rather long periods of time.
20. Even though completely innocent of wrongdoing, visibly suffers or cries in sympathy when another child is being reprimanded.
21. Exhibits many reactions of timidity; fears certain animals or situations to

- such a degree as to call attention to himself.
22. Excessively concerned with his appearance; abnormally tidy and neat in comparison with others of his age.
 23. Possesses the habit of telling lies on any occasion to suit his purposes and does so with unemotional skill.
 24. Seldom or never shows remorse over injury which he has intentionally or accidentally caused another student.
 25. Shows a tendency to do certain routinized acts over and over again, somewhat as though it were part of a ritual; may walk about the room a certain way each time or go through identical and unnecessary motions each time he opens a book.
 26. Absents himself from school without adequate reason and shows little genuine remorse.
 27. Exhibits a high degree of indecisiveness when relatively minor choices must be made; cannot make up his mind.
 28. Stutters most of the time, or more obviously when attention is directed toward him; if observed carefully, will be discovered speaking normally when singing or when completely relaxed.
 29. Highly restricted in emotional expression; never seems able to "let himself go" or to relax and enjoy himself.
 30. On occasion has been known to lose his voice momentarily when frightened or very embarrassed, despite the fact that others do not react in that manner in the same situation.
 31. Appears to be perpetually fatigued even though medical check-up discloses no physical ailment; appears to be lethargic, tired, listless.
 32. Frequently has a dazed, perplexed, confused expression on his face; seems to be touching only the surface of life, with many commonplace occurrences not impressing themselves upon his consciousness.
 33. Although having been checked for physical causes, occasionally faints, particularly when under stress.
 34. Seems to be hostile toward any kind of higher authority—the teacher, parents, policemen, principal, student council, the president of the United States; always able to show where such people in authority are wrong or incapable.
 35. Very self-punitive; appears to enjoy being injured psychologically or physically.
 36. Subject to frequent headaches for which no physical cause can be found; complains of such headaches to the teacher and seems to be really suffering, yet the headaches may come at very opportune times for avoiding some difficulty.
 37. One of those people to whom accidents seem to occur much more frequently than they do to most others in his group; injures himself on the playground, in the classroom, or while playing, supposedly accidentally, yet much more frequently than do others.
 38. Can hardly bear being in large groups of people, as at school assemblies; asks to be excused on some pretense or may admit fearing the situation.
 39. Repeatedly destructive of material things; carves desks, writes on walls, or simply breaks things of no value, for the joy of it.
 40. Shows peculiarities in dress which seem to have some ritualistic or mysterious significance to him, such as wearing an unusual type of cap all the time or carrying a certain trinket with him.
- Attention should be called to the fact that this listing of behavior descriptions is representative rather than complete. It points out to the teacher some of the areas where evidence of maladjustment may be noted. Each child handicapped in some way by improper mental hygiene or faulty personality adjustment will display many additional symptoms, and the alert teacher will observe these as well.
- Should a teacher feel that a sufficient number of evidences are present in any child, the problem should be discussed with the parent. Perhaps telling the parent about the behavior patterns that the teacher has observed would show the areas of agreement and disagreement between the observations of the two individuals

who know the child best. Obviously, the child should not be aware that any such discussion of his case is taking place.

If, as a result of the teacher-parent conference, it seems advisable to have expert advice in the matter, the school psychologist (if one is available) or some other person well trained and prepared in the psychology of childhood disorders should be consulted. The list of patterns agreed upon by the parent and the teacher should also be of use to the consultant, for it represents the observations of two other individuals who have been in position to see the child under a variety of circumstances.

It would be expecting too much to hope that a teacher could do effective work in mental hygiene without considerable training, as well as experience. No listing of behavior patterns will be of value unless the teacher understands fundamental as-

pects of mental hygiene. It is imperative, therefore, that teachers be encouraged to take college courses in such fields as classroom mental hygiene, personality development and adjustment, psychological testing, and abnormal psychology. These will be of value to him in understanding his own personality and mental health as well as that of his pupils.

In addition, most teachers will find it necessary to do continuous reading in journals devoted to mental health and to use such aids as the list of behavior patterns given above to systematize their approach to the mental-hygiene problems that children face. With those resources, plus the desire to meet their obligation to the child in this important area of personality development, there is no question that many children will benefit from improved instruction.

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Emotional Problems in Reading

Elsie J. Dotson

The emotional problems and adjustment techniques of college students which result in inefficient reading are not unique to the reading act. Rather the way a person reads is a reflection of many aspects of his personality. We express our "self" in the way we walk, sleep, eat, talk and read—in short, in the way we live; our needs, our defenses, our fears, and our aspirations determine both the action and the form of our every-day behavior. When an individual reads, it is not a sterile, rote process; it is not an act of reading; rather *he* is reading. In order to understand the

reading problems of a particular individual one must understand the individual.

EARLY EXPERIENCES IN ACQUIRING ATTITUDES

Most of the primal concepts which the individual has of himself are formed during the first years of his life. The first and major patterns after which a child attempts to mold his life are those of his parents. If he sees his parents read for information and for recreation he will aspire to do these things himself. The child whose parents read to him as a means of

entertainment is subtly acquiring both a definition of and an attitude toward reading. Many of the students who regard reading solely as an academic skill to be used in acquiring information have this limited concept as a result of a home environment which was devoid of reading experiences, or one in which reading was only occasionally utilized to gain information.

Perhaps the most basic attitude to learning is that of curiosity, one's exploratory tendencies toward himself and his world. By the time a child reaches school age he has clearly defined ways of behaving with reference to these tendencies. The child whose venturesomeness and curiosity was met with satisfying answers and encouragement enjoys seeking and defines this tendency in himself as one which brings rewards and pleasures. The child whose explorations were looked upon as bothersome and/or naughty will come to feel that these tendencies within him are not acceptable to others; he will begin to fear them in himself. In his efforts to suppress these tendencies he may become very passive in relating to the world about him, fearful of exploring into it; he may become overly compliant with what he interprets to be the demands and expectations of the world, attempting to do only those things which please; or he may resent this disapproval of his needs and either through active or passive methods begin to defy these prohibitions. These tendencies and what he does with them determine how the child will tackle new tasks. Reading is one of the most common methods of encountering new experiences and ideas. Thus the attitudes one has toward these needs, or tendencies, in himself are crucial in determining how and why he reads.

The expectations which others have of the child and his adequacy to meet them play a very important part in the way the child sees himself and, consequently, in determining how he behaves. A child brought up in an environment in which

the demands and expectations of him do not exceed his capacities, feels adequate to meeting new experiences; he seeks and enjoys them. A child brought up in an environment in which the demands and expectations are too great for him comes to feel unable to cope with life; he is fearful, less willing to try, more apt to avoid new experiences.

By the time a child reaches school age, he has some clearly defined ideas about himself and the way the rest of the world behaves toward him; and these ideas determine the "how and why" of his behavior. School offers the child a plethora of new experiences through which to test these ideas: to expand, to modify, or to strengthen them. Teachers will come to occupy the position in his life that heretofore only his parents held. If his teachers are loved, the child will seek to please and emulate them; if they are feared or hated, the child will resist or defy them. Books and reading now become projects which the child is required to master. The way in which he approaches these tasks will depend in part on the attitudes which he has concerning himself, the world, and the feelings he has concerning the new people in his environment. Books now begin to take on an additional quality of being synonymous with authority. They must be mastered to please authority figures, and the "correct answers" are in them. Many students have problems in reading because they have problems in relating to authority. They are fearful of authority, antagonistic toward it, or too dependent upon it.

The way a child reads and the way he views reading is also determined by the way his peers regard reading. If his associates enjoy reading and place value on doing well in it, so will he. If his group feels it is "sissy" or "eggheadish" to read and enjoy reading, the child may not permit himself to enjoy reading for fear of viewing himself and/or being viewed by others in an unfavorable light. The peer

group is a potent force in determining the values and attitudes of school age children.

By the time the individual reaches high school, reading is as much a part of his life as anything else. He reads to learn, to recreate, to kill time, to compete, to please someone, to win respect, to explore life, to escape life—reading is one of the many avenues through which and in which he lives.

PROBLEMS ENCOUNTERED

There probably are no personality patterns which are peculiar to reading problems and no reading problem which has as its etiology a specific attitude or emotional dynamic. The same behavioral manifestation can mean two different things for two different people. Not all people with emotional problems have reading problems, nor are all reading problems the result of emotional difficulties. Oddly enough, some people may actually be better readers or students because of emotional problems. For most college students, however, very poor or ineffectual reading and learning problems are a reflection of negative attitudes toward the self and toward parts of the environment.

One of the most commonly encountered "reading problems" in a college reading laboratory is that of the excessively slow reader; he may even be so slow as to read each word individually. There are innumerable causes for this method of reading. Many times in conversation with this type of reader he will tell you that he is afraid of "missing something." Normally missing something is not too threatening if missing something means only that, but if one error calls up all of one's fears of inadequacy, then one error is quite frightening. To illustrate through an analogy, suppose after you go to bed at night you hear a floor board pop. Usually you recognize this for what it is—a board popping as the house cools off. However, suppose you were reading a particularly exciting murder mystery before you turned out the

light. Now the popping of the floor might get a different interpretation from you. All of your fears about life, death and aggression are apt to be a little closer to awareness, and the sound takes on meaning in terms of these feelings. Disproportionate to be sure—that is, if you were just reacting to the sounds of a cooling house. This, in a sense, is the way a person may react to the fear of missing something. His fears of failure are greater and closer to awareness than those of most people, and much of his behavior is influenced by his efforts to avoid an encounter with these feelings; so he reads slowly and often with more than adequate retention, retaining practically all the details. He seems to reason that if he gets it all, he is safe. Some of these readers, incidentally, are excellent students, if grades are used as a method of evaluation.

Another possible cause for word reading is that of overdependency—the individual "waits to be told." This reader is usually slow since he is waiting to see what he will be told. He does not take the initiative in forming a set of expectations or questions about what he is to read. He takes what he reads literally and does not generalize from what he reads or evaluate it. He accepts his books, as he does his teachers and others in positions of authority, as sources of guidance not to be questioned, rather to be relied upon.

Resistance can also be a cause of slow reading or word-for-word reading. The individual, for some reason, may rebel at the demands being placed upon him. Unconsciously, or consciously, he resents having to do the task; so he finds himself at war with himself, fighting to do the task and fighting not to do it. Thus he reads quite slowly. Resistance may occur when the individual feels that unreasonable and/or excessive demands have been placed upon him. As a result he may come to feel he is unable to obtain love and acceptance for himself as he is. Resistance may then be for him the only means of genuinely ex-

pressing himself—it is his effort to maintain some sense of self-integrity—it is the one thing he has done on his own. Resistance can also be a means of expressing his hostility toward those whom he is resisting. For some children open rebellion, from the child's viewpoint, would have resulted in complete rejection; so the child resorted to a more subtle and less threatening form of resistance. In some instances failure through resistance was far more effective than open rebellion—the child simply failed to be what the parent wanted him most to be—a good student.

Another problem encountered in the reading laboratory is that of the "literal reader" who reads each statement fact for fact, not integrating facts, not reacting to statements, nor generalizing from them. It seems this reader lacks "aggressiveness" in his reading. The person who reads in a passive manner has repressed aggressive behavior in an effort to get rid of feared aggressive and/or competitive needs. During the course of this person's life he has been made to feel fearful of his aggressive impulses. These impulses were unacceptable to those persons on whom he depended. Therefore any aggressive act, even in reading, threatens the unleashing of these feelings. A strongly competitive individual who fears his own competitiveness may react to these fears in the same way. This suppression of aggressive thinking can be carried to the extent of making the individual look much less intelligent than he actually is.

Overdependency can also restrict the amount of initiative which the individual will display in his reading. Thus the individual will fail to do much independent thinking with what he reads.

The student who seemingly cannot get interested in his reading and/or his studying is not infrequently encountered in the reading laboratory. Sometimes back of this lies a conscious or unconscious preoccupation with a problem; the student's psychic energy, so to speak, is all used up in the

contemplation of this problem. Again it could be that the student is fearful of trying, believing it is better to have ventured nothing and lost nothing than to have ventured and failed. Through this line of reasoning the student attempts to maintain some concept of himself as adequate. In cases of this type the student may be able to invest of himself in subjects which do not threaten him. Again this lack of interest could be a form of resistance, particularly if the student is undertaking the course as a means of pleasing someone else. The inability to concentrate is usually a function of these same types of motives.

This is by no means a comprehensive list of the attitudes underlying the reading problems of college students, but it does touch upon some of the major themes encountered. These attitudes do not occur in isolation as they were mentioned here, but they occur as part of a total constellation that is the person. Several of these attitudes may occur together; certainly they will occur in conjunction with many more. It is only by seeing the warp and woof clearly as separate pieces of yarn, simultaneously with seeing them as one piece of cloth, that the fabric can be understood.

REMEDIAL PROCEDURES

Requisite to the improvement in the way these people read is a milieu which will permit a modification in the way the individual views himself and the nature of the task he is undertaking. For some students this may necessitate individual work with a reading clinician; for others, working in a small remedial reading group; for others, a large group program; and for some, personal counseling.

The small remedial group is usually the most practical from the viewpoint of the reading clinic, since it permits the clinician to work with several students at the same time while devoting sufficient time to each. There are also many psycho-

logical advantages to such an arrangement. The student who works in a small group with others who read approximately as he does has the opportunity to understand and diagnose himself through observing the others in the group and comparing himself with them. An awareness that there are others with similar problems to his own allows him to feel less unique, and this in itself gives him support. It is advantageous also to have suggestions and corrections made by the students themselves. This lends a peer sanction and acceptance to the advice offered. It also allows the student to experience himself in a new role—that of giving advice. By discussing and thinking with others about

what he reads, he has the experience of being able to make a contribution from what he reads, and begins to experience reading as a source of self-pleasure and self-enhancement.

It is a "sine qua non" in a reading laboratory that the reading task set before the student be one which challenges him and one which he can master. The pressure put on the student to succeed should be minimal, and the efforts that he makes should be recognized and rewarded. The reading laboratory is a place which offers an environment in which the individual can re-evaluate himself through a different set of experiences and new relationships with others.

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Emotional Factors and Reading Disabilities: Diagnostic Problems*

C. M. Louttit

Failure to learn to read may be brought about by a variety of factors. Visual defect and intellectual retardation will almost certainly limit the child's achievement in reading or in the other language skills or in arithmetic. It is my task, however, to examine emotional factors in failure to achieve in reading or other tool subjects and especially to look at diagnostic problems involved. As has been pointed out by Helen M. Robinson and illustrated in research reports cited by her, the relation of emotional factors to reading disability is complex. On the one hand, the

child may fail to learn to read because of emotional, or I would prefer to say "personality," problems. On the other hand, his failure to learn to read may be at least a precipitating cause of the development of personality difficulties. Further complexity is found in the child whose emotional problems interfere with learning to read, and whose failure in this skill in turn aggravates his emotional problems. This complexity of relations between reading and personality problems requires skilful diagnosis.

What is the nature of the emotional or personality problems about which we are concerned? It is impossible to review here

* *Elementary School Journal*, LVI (October, 1955), 68-72.

the gamut of behaviors which one would find discussed in textbooks in child psychiatry. For convenience I will mention three categories: (1) attitudes toward school or toward reading itself; (2) emotions in the narrower sense, more particularly, fears; and (3) personality characteristics commonly thought of as maladjustive, such as insecurity, dependence, shyness, or instability.

This division must not be taken as "real" because the separation of one from the others in a particular child is impossible. Further, while it is conceivable that one might find a child with negative attitudes toward reading, or fear of reading specifically and exclusively, or find a child who is insecure only in the reading situation, this would be most exceptional. Personality factors affecting reading or learning to read are, without doubt, also evidenced in many other situations of the child's daily life. Therefore the diagnostic tasks have reference not alone to the child's reading problems but to his behavior in general.

RESEARCH ON EMOTIONAL FACTORS IN READING

The search for emotional factors as etiologically significant in reading or other subject disabilities is relatively unrewarding. Research does not give unambiguous indication that personality problems are causative, although the concomitant of reading difficulty with such conditions is commonly found. Arthur I. Gates believes that three-quarters of the children with reading disabilities also show emotional problems but that for only one-quarter of these are the emotional problems of etiological importance. Robinson summarizes four reports of psychiatric study of children with reading disabilities by saying that they "reveal no consistent trends" but probably reflect the theoretical bias of the examiner. W. H. Missildine found all of thirty children with reading disability to be insecure, restless, and emotionally ill,

but the reading difficulty was only a small part of the problem behavior. These few references from many which could be used illustrate the claim made above that the search for emotional causes of reading trouble will be unrewarding.

On the other hand, Marion Monroe and Bertie Backus have separated out rather specific conditions which they feel do have etiological significance. Basically these are (1) general emotional immaturity, (2) excessive timidity and shyness, (3) predilection against reading, and (4) predilection against school in general. To these might be added excitability and instability, mentioned by B. M. Castner, and the anxieties attendant on adjusting to school, pointed out by Augusta Jameson. It is important to note in all of these conditions that they may have a specific inhibiting effect in the process of learning to read, while at the same time they may be evident in more widespread symptoms.

From the foregoing it is evident that the remedial teacher must recognize the importance of emotional problems but must also recognize that these are usually shown in behavior in general and are not limited to a relation with reading. As they are important, some attention should be given to methods of revealing the existence and nature of such problems.

TECHNIQUES FOR DIAGNOSIS

No available tests can be routinely applied to individuals or groups to obtain a score which will reveal the nature of the emotional problem and its relation to reading or other subject disabilities. Rather, diagnosis in this area requires objective observation of behavior and clinical insight in interpretation. For convenience we may mention three aspects of diagnostic study which are usually closely interrelated: observation of behavior, interviewing, and the use of formal testing instruments.

Observation of behavior. Observation of behavior as a diagnostic method is

placed first because it has nothing technical about it; in fact, a teacher cannot avoid seeing what children do. But to be useful in understanding a child, the observation must be done with intent and with a certain amount of system. Also it must be objective and not influenced by the observer's bias, which will emphasize certain acts and minimize or even eliminate others. Using an outline of behavior events considered significant, making a record of events observed, or marking an instrument, such as the Haggerty-Olson-Wickman Behavior Rating Scale, are all helpful in getting information about a child through observation.

Now what to look for: recording the activity of each moment of a child's day is rather impractical. But consistent attention to behavior in the classrooms, on playgrounds or in halls, alone and with other children, in recitation or study situations, and many other occasions during the school day should soon reveal patterns of behavior. Is the child usually shy and retiring? Does he play with other children in a normal manner for his age, or is he aggressive and demanding and always insisting on having his own way? On the other hand, does he avoid the other children, and how—with timid interest in their activities at a distance, with sulking protest, or with just plain lack of interest in their play? Are the fears or timidity exhibited when called upon to read or recite before a class shown also when the child and teacher are alone? Is the child excitable, easily distracted, attention-demanding, or is he reserved, even apathetic? What is his language behavior? Hearing a college student remark to his friend, "Me and Mary was gonna drive to the game, but we didn't find where the car was at, so we ain't goin'," makes one suspicious of his language behavior in general, including reading.

These questions are not a systematic guide to what behaviors to observe, but they suggest how observation may be used

to develop a picture of the child's personality, including his problems. The important purpose is to know, understand, and accept the child. The results of behavior observation may give a basis for more systematic and restricted forms of study.

Interviewing. By "interviewing" I mean any procedure by which the teacher or examiner controls the child's behavior in some measure—by conversation, questioning, or setting up a special situation in which behavior can be observed—and in which the behavior is a function in large measure of the examiner-child interaction.

Interviewing requires skills not so necessary in observation alone. In the two-person social situation the examiner must succeed in establishing rapport so that the child will respond. Questions must be formulated to elicit answers. Rather than the direct question, "Do you like reading?" an open-ended inquiry such as, "How do you feel about reading?" may bring a more informative response. Perhaps the child cannot formulate his feelings about the matter in words, especially when the question asks about himself. Stories about other children may set a basis for questions about feelings and attitudes of the fictional characters, the answer to which may reveal the child's own attitudes. Projective methods, such as pictures, incomplete sentences, or incomplete stories, when specially devised to relate to the disability under consideration, are valuable. The lack of standardization or norms is unimportant because the child's responses are elicited to reveal to the examiner the child's feeling, attitudes, or emotional tender spots, rather than to serve to compare this child with other children. Play-therapy techniques, usually devised to uncover intra-family relations, can be designed to emphasize relations to school or school subjects or other children.

The point I am trying to make here is that the teacher can learn a great deal about the emotional or personality charac-

teristics of the child by observing him carefully and objectively in everyday situations. In the face-to-face interview the teacher can set the stage, so to speak, in order to observe the child's behavior in situations over which the examiner has some control. The objective is to learn about the child, to understand him, and to interpret these observations in relation to the school disability needing attention. It is a matter of informed clinical judgment just how significant emotional factors may be in the problem of a particular child.

Formal testing instruments. The third category of diagnostic methods, formal testing instruments, I have left until last and will consider briefly because I do not believe they are of very great usefulness in the particular situation of reading or similar disability. It should be pointed out that tests are, in the last analysis, only standard stimulus situations to which the subject is to respond. They measure nothing in the sense in which a yardstick measures. They do reveal the response behavior of the subject, and these responses may in part be quantified and then compared with the performance of some standard or comparison group. Such information is valuable, but its interpretation needs the same kind of insight that is required in interpreting observation or interview data.

The number of instruments used for investigating personality is legion. They are available for all age and grade ranges and are designed for group or individual use. Some are structured as questionnaires or inventories, while the projective types allow free verbal or motor (drawing) responses. The structural questionnaire type of test is useful for study of groups, but for individual diagnosis it can do little more than add a number, that is, the score, to other data already available and perhaps serve as a guide for interviewing, during which unusual responses may be explored. I am in complete agreement with L. F. Shaffer when he says, in reviewing a particular questionnaire, that "such de-

vices vainly seek the pot of gold at the end of the rainbow: a simple, cheap, fool-proof method for studying human personality." The study of personality, especially in the clinical situation, is not so simple. By these remarks I am not rejecting questionnaires, but they must be used in the proper ways. For screening purposes, to pick out the individuals with extreme scores, or for research in groups, they have value. Further, the record of a child's responses when studied item by item may give valuable cues to traits or problems that can be followed up in other ways. The question is whether such information may not already be available from other study and therefore make the giving of such tests unnecessary.

The use of projective-type personality tests is not subject to the same criticisms that are directed to questionnaires. Although some efforts have been made to devise methods of presenting projective tests to groups, they remain essentially instruments for individual study. Robert S. Redmount and Ruth Solomon, among others, have used the Rorschach test to study children with reading disabilities. They agree that their subjects gave evidence of questionable adjustment. Redmount found two-thirds of his subjects "severely maladjusted," with personality characteristics of rigidity, lack of spontaneity, hostility, sensitivity, insecurity, anxiety, and family conflict. Solomon reports the poor readers to be preoccupied with minute detail and as failing to attend to the practical and concrete. However, Solomon concludes that prediction of reading disability cannot be made from the Rorschach test. This I think is significant: the Rorschach tests may reveal a personality pattern, but the patterns found may or may not be significant in the disability.

Certain projective techniques, such as the Thematic Apperception Test, or the Children's Apperception Test, or the Blacky Pictures, or incomplete sentences, all of which are interpreted in terms of

the content of the responses, may be extremely valuable. Here the child's language, as well as the content themes of meaning to him, are shown. While these tests are standard, there is no reason why an examiner interested particularly in reading disability may not add pictures or devise incomplete sentences which are designed to bring forth reactions that have an immediate relevance to the disability of concern. True, these will not be standard tests, but for diagnostic purposes they will probably be of greater value.

SUMMARY

Our problem is to discover the presence of emotional factors in a child with a subject disability and to determine whether or not these factors are significant in the etiology of the condition in this particular case. To do this requires an understanding of the child as a behaving individual. Initially this process of understanding must inevitably start with observations of his behavior. More refined information may be secured by observation in a controlled situation, in an interview or play session. Still greater refinement of data may be secured by the use of tests when they are used as specialized clinical tools and not yardsticks for determining a score.

There is certainly no reason why every remedial teacher should not be able to learn much about children by observation

and interview. Many can also use specialized instruments, but here it is necessary to caution that the use of such tools requires skill and knowledge which come from training. The administration of tests is usually simple. The interpretation of results is not and should be undertaken only by those who have the necessary skills. Further, as has been earlier mentioned, emotional problems are seldom, if ever, uniquely related to reading difficulty. Therefore, a child with a reading disability who exhibits emotional or personality problems should be considered as needing attention beyond remedial reading. This is usually the responsibility of a specialist in psychology or psychiatry, and such special service should be sought.

This thought leads to a final point I wish to make. The personality problems frequently reported for children with reading disabilities are of the nature of timidity, insecurity, and other indications of the child's failure to find acceptance in the world. The remedial teacher has the task of helping the child with his disability. He cannot hope to affect parental rejection or inconsistency. He cannot undertake psychotherapy with the child. But he can accept the child as he is, give him support and security, appreciate and encourage him in his positive characteristics, and in this way afford a more wholesome atmosphere in which the child can attack his specific problem.

help him overcome this difficulty. He can be helped to feel comfortable by assuring him that many boys and girls have similar difficulties and that he can be helped. Some of his anxiety about failure may be relieved by assuring him that not only are mistakes permissible but that he is expected to make mistakes. He need not be afraid of his errors because they will help both himself and the tutor understand the kind of assistance he needs. With little further explanation, the lesson may be started.

Rapport can be established in many ways, and the way will necessarily vary with each child. With some children a bond can be established through a mutual interest, such as baseball, football, stamp-collecting, or any other interest or hobby that they may reveal and that a tutor can share.

It is not always possible to find a mutual interest. This does not preclude a friendly relationship, and it should be remembered that the main interest of both pupil and tutor when they are together is that the pupil learns to read. A friendly, businesslike atmosphere is reassuring and effective. Mutual interests, other than reading, are helpful to get the sessions started and may well be used even in later sessions, but they should not be allowed to interfere with the work at hand.

It may not always be desirable to start off sessions by talking with the youngster. Many children with reading problems are passive and withdrawn and find it difficult to verbalize freely. They feel uncomfortable when the tutors try to draw them out. In such cases the tutor may start work at once or use a game as an icebreaker.

STRUCTURING THE REMEDIAL SESSIONS

During the first session the tutor presents the framework of the remedial plan to the child. For example, the tutor will explain that the hour will be divided into many activities—oral reading; silent read-

ing and answering questions; work in helping the child figure out new words; and recreational activities, such as games, listening to stories read by the teacher, construction, and similar activities. The child, however, is given an opportunity to help set up the plan. He may be asked to select his reader from among several at the same grade level. He may also decide on the order of the different activities. This serves to make the remedial-reading session a collaborative experience and one in which he feels responsible. Collaboration is especially important for children who have had all their planning done for them in school or in the home. Getting the child's help on setting up the remedial plan will also tend to minimize petty bickerings about continuing the recreational period beyond time limits or placing the recreational period at a different time every session.

Making a choice, however, may be too great a responsibility for a child whose standards have always been rigidly set for him. It is, therefore, important for the remedial worker to have a fairly well-defined plan in his mind with regard to instruction and materials lest he put too great a burden on the child.

For example, Frank's tutor, in his attempts to be permissive, kept asking Frank, "What do you want to do now?" "What book do you want to read?" Such floundering on the part of the tutor merely increased the child's insecurity and upset him needlessly. The child's reaction was, "If you don't know which book I should read, how am I expected to know?" Many children are not used to having a highly flexible situation, and it puts too much responsibility on them.

It is necessary, therefore, to estimate the child's capacity for choice and decision early. Certain children have difficulty in making decisions. Norman, a fourteen-year-old, who found it difficult to talk to his tutor, also found it difficult to make decisions. The tutor wrote: "He lacks

Psychotherapeutic Principles as Applied to Remedial Reading*

Charles C. Dahlberg, M.D., Florence Roswell, and Jeanne Chall

Recent studies of reading disability point to the high incidence of emotional disturbance among children who fail to learn to read. Whether the emotional disturbance is the cause, the effect, or a concomitant feature of the reading disability is not always clear. But that emotional disturbance characterizes most children with severe reading disability is a fact that remedial teachers know only too well.

Psychologists and remedial teachers report that in the course of remedial treatment marked changes are frequently apparent in the child's general adjustment. These observations are usually confirmed by parents and classroom teachers.

The writers here discuss how therapeutic factors in the remedial situation may become more intentional, and hereby more constructive, through an application of certain psychotherapeutic principles. It is not to be inferred, however, that remedial reading may be used as a substitute for more intensive psychotherapy where that is indicated.

The goal of any psychotherapy is to increase the individual's realistic understanding and acceptance of himself as a worth-while human being with certain assets and capabilities, as well as liabilities and limitations. The remedial-reading situation can serve this goal by providing

successful experiences in an area in which previous experience was highly unsuccessful, thereby decreasing the child's anxiety with regard to his capabilities. The remedial-reading situation also affords a constructive relationship with an adult, sometimes the first such relationship for a child, and thus helps the child build up his self-esteem.

The writers assume that the psychologist, teacher, or remedial worker is acquainted with current techniques and procedures in remedial reading. We will discuss some psychotherapeutic principles and ways in which they can be used not only to teach the child to read but to approach some of the goals of psychotherapy.

ESTABLISHING RAPPORT

It is assumed that, before the initial contact with the child is made, the tutor will have a considerable amount of background information and psychological data about the child.

At the first meeting, after the child is greeted in a friendly manner, it is advisable for the tutor to define the purpose of the sessions and to make clear to the child why he is coming in terms that are understandable to a child of his age. It might be explained to him that, since he is having difficulty with reading, he and the tutor are going to work together to

* *Elementary School Journal*, LIII (December, 1952), 211-17.

help him overcome this difficulty. He can be helped to feel comfortable by assuring him that many boys and girls have similar difficulties and that he can be helped. Some of his anxiety about failure may be relieved by assuring him that not only are mistakes permissible but that he is expected to make mistakes. He need not be afraid of his errors because they will help both himself and the tutor understand the kind of assistance he needs. With little further explanation, the lesson may be started.

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It is necessary, therefore, to estimate the child's capacity for choice and decision early. Certain children have difficulty in making decisions. Norman, a fourteen-year-old, who found it difficult to talk to his tutor, also found it difficult to make decisions. The tutor wrote: "He lacks

initiative and has a definite need for guidance in a structured situation. Any attempt to let him decide upon any part of the reading program is met with an 'I don't care' and a shrug of the shoulders." Prodding such a child to make his own decisions would have aroused his anxiety and would prove detrimental to the learning situation. This does not mean that the tutor cannot be flexible and permissive, but he must act within the framework of the total plan.

Some tutors are afraid of being authoritative in such situations. It is important to differentiate here between rational and irrational authority. When the tutor sets up a plan based on a thorough diagnosis of a child's needs and capabilities, he uses rational authority. His authority is based on the fact that he, as the tutor, has certain specific skills which he can use in the child's best interests. Children feel secure when such authority is exercised. It is irrational authority that is harmful—authority which, because the tutor is bigger and stronger than the child, sets standards and limitations with no relation to the child's needs and capabilities.

PERMISSIVENESS AND ACCEPTANCE

After initial rapport has been established and the remedial sessions have been planned either through the collaborative efforts of teacher and pupil or by the teacher in the best interests of the child, the next problems are then concerned essentially with the continuing relationship between the teacher and child: the co-operative carrying-out of the remedial plan and the proper attitude of permissiveness and acceptance. The teacher is concerned with such questions as: "How much freedom should the child be given?" "What actions should be taken if the child refuses to engage in the reading activities planned?"

When there is a good teaching program, many of these problems will not arise. When the material used conveys meaning,

when the level of difficulty insures success and a sense of achievement, and when sufficient variety is afforded to avoid monotony, the program proceeds in a matter-of-fact manner with a minimum of upsets. However, occasional difficulties may arise in any program, particularly with less experienced remedial workers.

It is well, then, for the teacher to distinguish between permissiveness and license. For example, John's tutor, in his attempts to be accepting and permissive, said, "You may do anything you want here—you won't have to do anything you don't want to do." This violation of the need for structuring the remedial situation had many reverberations during the remedial sessions. On several occasions John refused to do work in his workbook, giving as his reason the promise that the tutor had made to him at the beginning of the sessions—that he would not have to do anything he did not want to do.

This is an erroneous interpretation of the terms "accepting" and "permissive." Such an attitude on the part of the tutor may cause considerable anxiety, especially in those children who do not know what to expect from the world about them and in those whose environment has been hostile, unstable, and inconsistent. For such children, setting up rules and consistently keeping to limits serves to relieve their anxiety, for they do not have to keep trying to see how far they can go with the tutor. Thus, permissiveness does not mean that the child may do anything he wants. He may not tear the room apart, walk all over the tutor, or make noises that are disturbing to people in surrounding offices. He is given more freedom than it is possible to allow in a regular classroom, but he is not free to do anything that he may suddenly decide to do.

The term "acceptance" needs further elaboration. The remedial worker accepts the child exactly as he is and not for what he can accomplish. The child is accepted as a worth-while human being with cer-

tain problems, one of which is difficulty in reading. However, accepting the child as a human being worthy of respect does not mean approving everything he does, for example, destructive activity. One can understand his need for such activity but not approve his way of expression.

When the child is destructive, the teacher will have to decide on the appropriate course of action. If the child uses the scissors to hurt someone or to carve on the desk, the teacher should, of course, take the scissors away from him. Most unusual behavior can be handled by saying: "This is not what you are here for. It does not help you to do this. If you continue to do it, I shall have to stop you."

On the other hand, there will occasionally be children who are too disturbed to be handled in a tutoring situation. These children may need intensive psychotherapy before they can accept tutoring.

In general, the tutor should allow some unimportant deviations. In most cases where a child is testing the limits of the tutor, a reminder such as, "Well, you know you can't do that," will handle the situation.

If a child who has been generally cooperative at most of the sessions has one bad day, the tutor can merely close the books, not in a hostile way, and say something like this: "You don't seem to be able to do so well today. Let's do something else." If the child is consistently uncooperative, the situation must be looked into further from both the educational and the psychological points of view.

GUARDED USE OF INTERPRETATION

Some children will talk about their problems and also about pleasant experiences which they had outside of tutoring. In general it is good policy to allow them, and even to encourage them, to do so, but not to a degree where their talking materially interferes with the time allowed for tutoring. It is not necessary for a child to take his tutor into his private life for

the reading sessions to be successful. If the child chooses to do so, the tutor should listen respectfully and make natural comments, expressing sympathy, understanding, happiness for the child's triumphs, or whatever would be appropriate between any two people who respect one another and have something in common.

What should be done if the child tells of something his mother does which is obviously harmful to him? What the tutor can do is make a simple statement, such as, "That must have been pretty hard to take." This sort of comment serves to back the child up in his feelings but does not interfere with the relationship which the child has with his mother.

Similar action would apply to a child's remarks about his teachers. It is not helpful to the child to give him ammunition to use against persons who will respond to the child's attack by becoming even more threatening. If a child is having difficulty with a teacher, it may be suggested that there might be a better way to handle the situation. Help should be given to the child to see that some persons are the way they are and that he cannot change them. This does not mean that he cannot get along with them without losing his self-respect. In the case of most negative observations, a neutral opinion is the safest reaction.

It is equally important to respond objectively to the child's relating of a successful experience outside the tutoring situation or to a successful experience in the tutoring session. When the child tells about a successful school experience, the tutor might use some words to this effect, "That must have made you feel good," rather than saying, "Isn't that wonderful," and feeling happy himself. The remark, "That must have made you feel good" does two things. It helps form the child's own feeling about himself, and it implies that the tutor is not surprised that he did so well. Being made to feel that he has accomplished for himself and that he

should be proud of himself is an unusual experience for many a child. Too many children are encouraged to work, not for themselves, but for their parents and teachers. The tutor must guard against encouraging the child to work now for him. Anything that affirms the child's own interest and pride in doing well contributes to the child's well-being.

We feel that the tutor's remarks on subjects which do not pertain to the reading problem directly should be of the sort which will not stir up anxiety and problems for the child. Comments that tend to interpret the actions and motivations of the child or of his parents are out of order. Equally out of order are interpretations of dreams. Such interpretations detract from the work at hand, and the resultant problems cannot be handled within the limitations of the remedial-reading situation.

OBJECTIVITY

It is important for the remedial worker to maintain an objective attitude throughout the relationship and to avoid becoming overinvolved with the child. Overinvolvement interferes with objectivity in observation of the child and also with the tutor's reactions to the child.

When the tutor becomes overinvolved with the child, he may show too great concern about the child's performance. The child is then put in the hazardous position of trying to do well to please the tutor. When he does poorly, he may feel that he has not only let himself down but has also disappointed the tutor. Then, instead of being able to make mistakes freely, he may become overanxious about his performance, wishing to make constant improvement. Since constant improvement is not characteristic of the learning process, an objective attitude on the part of the tutor makes it easier for the child to adjust to the fluctuations in reading performance.

Overinvolvement may also engender feelings of rejection on the part of the child when it becomes necessary to terminate the tutoring. Since the goal of all tutoring is to make itself unnecessary, the tutor must allow the child to become independent of him.

The caution against overinvolvement does not, of course, bar being friendly with the youngster. The tutor can be warm and friendly, but he must guard against becoming emotionally involved lest he expect too much from the child in terms of satisfying his own needs. When the child's love is not forthcoming, this might lead to disappointment on the part of the tutor and his consequent rejection of the child. The tutor should remember that, while the child comes to him because someone feels he should learn to read, the child does not have to learn to read and that the tutor's self-esteem should not depend upon his success with an individual child.

TERMINATION OF TUTOR-PUPIL CONTACTS

The termination of the remedial-reading sessions should also be a constructive, collaborative enterprise. The final session should be anticipated. If the tutoring has been highly successful, the child will probably recognize this fact and may be the first to realize that he is about finished with these lessons. In that case, it is best that the tutor say something to this effect, "You won't be coming here much longer. Have you thought about stopping seeing me?" This helps bring the child into the process of termination, just as he has had a part in the rest of the relationship. It affirms again his understanding that he has something to do with the tutoring and has opinions which are respected. This is true whether or not he says anything in response to the tutor's remarks about discontinuing the sessions. He should have some time to think about discontinuing the sessions and may be given an opportunity to mention the topic whenever he

chooses. It should be recognized that, if the relationship with the tutor is important to the child, it may be difficult for him to discontinue his meetings with the tutor. However, most children who have made sufficient progress in their reading will not desire to come much beyond the natural period.

Some thought should be given to making further plans for the child's reading during the last few sessions, and this should be discussed in some detail. It may be that no further help of any sort will be necessary. In most cases, however, it is wise to help the child make plans for further, less intensive, help in his reading from some other source. Or some plans can be made so that he can go on progressing on his own if he has made sufficient progress to be able to do so. In such cases, an

occasional contact with the tutor, perhaps on a monthly basis, will be helpful not only to the child's reading but also in tapering off his relationship with the tutor. In every case it is a good idea for the tutor to offer the child the opportunity for an occasional meeting in the future and let the child decide whether he wants to take advantage of this or not.

As can be seen, the remarks concerning the relationship between child and tutor offer no specific psychotherapeutic tricks. There is described, however, a planned relationship between child and tutor which allows for freedom of individual expression and which is designed to keep anxiety at a minimum, increase the child's self-respect and self-esteem, further his ability to read, and offer him a satisfying relationship with an adult.

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Bibliotherapy*

Caroline Shrodes

The philosopher, the critic, and the artist through the centuries have attributed to the imaginative writer not only intuitive understanding of man's motives and his nature but also power to influence his thinking, to move his heart, and even to alter his behavior. More recently psychiatrists and psychologists have acknowledged that the novelist and playwright have plumbed the deep reaches of man's nature and often anticipated the discoveries of science. Bibliotherapy, drawing upon the insights of both artist and scientist, is grounded in the theory that there is an

* *The Reading Teacher*, IX (October, 1955), pp. 24-29.

integral relationship between the dynamics of the personality and the nature of vicarious experience. It is a process of dynamic interaction between the personality of the reader and imaginative literature which may engage his emotions and free them for conscious and productive use.

FACETS OF BIBLIOTHERAPY

Bibliotherapy is made possible by the "shock of recognition" the reader experiences when he beholds himself, or those close to him, in a story or some other piece of literature. So successfully does the skilled writer create an illusion of reality

that, as Freud says, "he is able to guide the current of our emotions, dam it up in one direction and make it flow in another." What is the nature of this interaction that may result, on the one hand, in distortion of the author's meaning and self-deception or, on the other hand, in understanding and insight?

Reading, like all other human behavior, is a function of the total personality. When we read fiction or drama, no less than when we work, meet people, teach, create, or love, we perceive in accordance with our needs, goals, defenses, and values. Parallel in substance and function to the primary phases of psychotherapy, the vicarious experience induced by reading includes: (1) identification, including projection and introjection, (2) catharsis, and (3) insight. The reader will abstract from the work of art only what he is able to perceive and organize. Hence, he may introject meaning that will satisfy his needs and reject meaning that is threatening to his ego. In either case what he experiences and feels determines what he perceives in the book and what meaning he attaches to it.

Bibliotherapy, like deep therapy, can be effective in breaking the circular processes in perceiving. These include the recurrent ideas which lend support to our image of ourselves and of our relationship to others and the practice of confusing real experience with the symbol, and of reacting to the symbol as we do to our own emotional conflicts. In deep therapy the relationship between therapist and patient provides an external frame of reference by means of the transference, which may free the patient by enabling him to re-live early traumatic experiences in an atmosphere of neutrality and acceptance. If the therapy is successful, he will gradually be able to differentiate between the early fear or guilt or hate and its later symbolic recurrence. Thereby he may acquire a new perspective of his experience and of himself in relation to it, and insight that liberates him

from the bondage it has imposed. Similarly, bibliotherapy provides a comparable situation for "breaking the vicious circle." It offers a new frame of reference which extends the reader's awareness and enriches his understanding. The degree to which his experience is extended depends upon the strength of the emotional attitudes evoked. If a character strongly arrests his attention, an identification may be made which, in effect, represents a transference of emotion from a previous experience to the vicarious experience. A positive identification is one that tends to enhance the reader's self regard and may provide a model for emulation. A negative identification is usually engendered because of threat to his image of himself and takes the form of projection on to the character the feelings which have been repressed because they are unacceptable to the ego. However, in inducing these projections, the reading process may serve as a catalyst to free his emotions from their unconscious roots. Murray has pointed out:

It is better to make allies than enemies of one's emotions. To rid oneself of troublesome projections one must become aware of them. . . .

LITERATURE AS EXPERIENCE

Literature in its direct and concrete representation of life engages the emotions and enables the reader to re-live his own experience. He may then view it freshly from the perspective of the detached observer rather than imbedded in the conventional summations of experience which often take the form of simple and unrealistic clichés about life such as, "It always works out for the best"; "It was meant to be"; "Mother knows best." In a work of literature the artist has organized the chaotic fragments of human experience, endowing them with meaning, but not imposing judgment. It is of the very essence of fiction or drama to depict experience differing only in degree from that of the reader. Hence attitudes of anger and con-

tempt, sympathy and understanding, are inevitably invoked. One cannot remain neutral in the presence of human beings in action. Literature, being at once phantasy and reality, permits the reader an illusion of standing apart and of being involved. Thus he is able to be both spectator and participant. Under the impact of emotion he may move about in a symbolic world which is inaccessible to him in life. He will bring to bear on a fictional situation, his predispositions, the circumstances of his life, his unique perspective, and in adding them up in relation to what is given, he may be compelled to re-evaluate his own experience.

On the other hand, vicarious experience may be too threatening to the reader's concept of himself to permit what has been repressed to become conscious. Instead of viewing his own life in a new frame of reference, which may result in a more realistic appraisal of his experience, he may project his anxieties and fears upon the characters the artist has created. However, even this seeming failure to gain insight offers valuable clues in a therapeutic approach to reading. It enables the instructor to understand the motivations of the reader, to recognize his defenses, and to give them support.

We have said that the nature of vicarious experience is determined by the personality of the reader; hence it may simply reflect his concept of himself, his relationship to others, and his view of the world, but it may also transform them. The illustrations that follow suggest how the reader's recognition of himself augments his self regard, gives him a feeling of belonging, and enables him to become aware of facets of his experience that he heretofore did not acknowledge. We shall note how a simple identification with a character may result in strengthening the reader's defenses and providing a rationalization for his failure; and how it may culminate in re-living a disturbing experience, in reappraisal of himself and those close to him,

and, thereby, in recovery of energy for constructive expression. The examples given are college students, but the ideas, if not the materials used, probably apply to children and adolescents.

SOME CASES OF IDENTIFICATION

When identification with a character takes place, it involves a recognition of similarity between the character and oneself. A young college freshman, who had never before felt any personal involvement in what he read, commented as follows on Sherwood Anderson's *Winesburg, Ohio*:

The stories gave me a frightened doubt that I myself was being portrayed in an exaggerated fashion.

Since the identification proceeded from a real correspondence between his own motivations and those of the character, his self recognition represents insight. His diction betrays both the shock of discovery and implied distaste. Since the portrayal, however, seemed to him exaggerated, the feeling of recognition was acceptable to him.

If the character with whom the reader identifies is unrealistic in coping with his problems, if his adjustment to life seems maladaptive, the recognition of himself in the character may provide a powerful deterrent to his continuation of his own life pattern. Such was the case of a female Mrs. Mitty, who, on reading Thurber's story, was startled to find that Mitty's fantasies were like her own. While most of the day she envisioned herself in command of her destiny and that of others, the remaining hours she languished in unquestioning subservience to her despotic husband. Her strong identification with Mr. Mitty permitted a detachment that enabled her to become aware of the split in her own life.

Identification may lead, on the other hand, to augmenting one's self regard through giving one a sense of belonging. A bright twenty-three year old girl, after reading *Sons and Lovers*, confessed with obvious astonishment, "I thought I was the only person in the whole world who

had a mother who was possessive and domineering." A disturbed veteran in his late thirties, who had given up a business career and returned to school to study writing, found solace in his identification with writers in whose journals the same kind of doubts and fears that he had experienced were recorded:

I've been thought by my family to be queer and peculiar, but to be humored. My family have tolerated me and humored me, but there is no real kinship. So it helps to read about these people . . . It was wonderful the way Anderson could close up shop and walk away from business and write . . . What made it difficult was my brother was such a dominant person; he accepted the proposition that worldly success was important to achieve . . . Success seemed unimportant to me. I know what I wanted to do—always to write, but doing it was difficult. My brother was indulgent toward me—even my father was—but I had the feeling they both thought I was off my trolley. So these journals you can see gave me a feeling of companionship. I *knew* before I wasn't really alone, but I wasn't able to *feel* it. Do you know how that can be? A person can know a thing in his mind, but he can't feel it. These journals enabled me to *feel* it.

INSIGHT INTO OTHER PERSONALITIES

In addition to self recognition, identification may take the form of recognition of others. The reader may for the first time see his mother or father with objectivity through the medium of imaginative literature. Such insight may not only be productive of a more realistic attitude toward their limitations and their strengths, but may also bring relief from the anxiety and guilt that accompany feelings of fear or hostility toward them. A Chinese-American girl alternately felt resentful and guilty because she had defied her parents first by attending college and then by refusing to marry the man of their choice for whom she felt no love. She recognized in Christina and Theobald in *The Way of All*

Flesh the same qualities that enraged her in her own parents. But she also perceived that they were severe and bigoted, like Ernest's parents, because they had been subjected to pressures beyond their control. This recognition gave her the necessary detachment to continue in college without feelings of ambivalence and guilt.

Alexander and French stress the importance of undergoing a new emotional experience to undo the morbid effects of past emotional experiences. Identification with characters and situations in literature permits a re-experience of the old, unsettled conflict but with a new solution. In some cases the identification is sufficiently strong to take the reader back in time and place to his own childhood. One student, a middle aged teacher, thought at first that *Sons and Lovers* was beautiful:

I spent more time in thinking about it than in the actual reading. It aroused many memories of my early life. They came to me in the middle of the night, in the street car. Memories of my mother, of her death, of her punishment of me, of my brother's scorn of me.

Later she commented on not being able to bear reading it and offered this explanation:

I never loved my mother. That is a dreadful thing to say, a dreadful thing to live through. I was happier when I was away from her. When I came home I was apt to be cross, sensitive, and unpleasant. My mother's spells of blues depressed me. Also she dominated me. I was ashamed of my attitude toward her so I never admitted it. . . . I was entirely too docile all my life, even submissive. That's why I hated the book even while I thought it was beautiful. It made me see how many years of misery I caused myself. I didn't like to admit I was so submissive. Also I didn't like to see my mother as she really was. Since her death I have idolized her. But now I know she wasn't mean like the mother in the book, nor spying and hypocritical. But she was efficient, too busy, ambitious, and brought up to believe in children's explicit obedience. I should wipe from my

mind both the picture of a perfect mother and the lingering resentment toward her.

The sympathy engendered for Paul was sufficiently strong to dissolve her own guilt and to uproot her hitherto repressed feelings. She was able, for the first time, to recognize the hostility she had felt toward her mother. Furthermore, in giving expression to her emotions as well as her reason, she was able to view her relationship with her mother in a new perspective and to differentiate between Paul's mother and her own mother. In so doing she was freed from the ambivalence that had tormented her and was emotionally ready to make the healthy resolution:

I should wipe from my mind both the picture of a perfect mother and the lingering resentment toward her.

THE TEACHER AND BIBLIOTHERAPY

We have presented a *rationale* for bibliotherapy and some illustrations of the interaction between the personality of the reader and the characters with whom he has identified, a fusion which has enabled him to re-live and re-assess his own experience. It must be remembered, however, that bibliotherapy is a demanding and rigorous discipline, which is not always productive of insight. Not all teachers are prepared to extend the scope of the reading program in this direction. Nevertheless, in spite of many obvious differences between the training and goal of the teacher of reading and that of the psychotherapist, both are concerned with fostering mental health. And regardless of the intent of the teacher, reading is a complex act involving the whole personality; a source of threat or of solace; a cause of separation of the emotions and the intel-

lect or of their integration. Hence, the greater the teacher's awareness of the dynamics of reading, the more success will he have in enlisting the imaginative artist as an ally in helping his students find coherence and value in their lives.

For most students a therapeutic approach to reading will be of most benefit as a kind of preventive therapy. At the very least it is likely to arouse an interest in books and help the student to find meaning in them. In some cases there may be a delayed reaction. A book that at the time of reading merely entertained him may become a part of his mind's store of images, a segment of his experienced world, a touchstone for his evaluation of experience, a salutary reminder of danger, a clue to understanding his motives, a clarification of reality, a strategy for coping, or a vision of order. For others there may be immediate results of increased self awareness and acceptance and a greater capacity to maintain satisfying human relationships. Finally, for some there may be a gradual acquisition of values, an antidote for those unconsciously incorporated from parental admonitions; from the brittleness and cynicism of many Hollywood productions; or from the success myth fostered by "self help" books, resplendent advertisements, and other mass media. Values that will guide and enrich our students' lives will not be superimposed from without but will grow out of the discovery of all of the facets of their personalities, the talents, curiosity, skills, and aspirations that enable them to know who they really are, what they may become, how they may relate to others. To these ends the imaginative writer contributes, for he is able to teach "the human heart, through its sympathies and antipathies, the knowledge of itself."

Johnny Can Read*

The Psychiatric Bulletin

In his preschool years Johnny Adams was an exceptional child, a near-prodigy. Before he was five years old he could play the trombone (by ear), could count to 50, and knew his ABC's. He could memorize long poems merely by listening. In kindergarten Johnny was attentive and he enjoyed going to school. Then, Johnny went to the first grade where children are taught the fundamentals of reading. Unfortunately, at the end of his first school year, Johnny failed because he could not read. His parents were astonished and appalled. Obviously, the child was bright, and his auditory and visual tests were normal. Scolding and bribing were equally fruitless, and he became sullen and, progressively, more discouraged. Finally a discerning teacher discovered the cause of the reading disability. Although Johnny was especially retentive of almost any type of learning that could be acquired by ear, he was completely baffled when he tried to assimilate printed symbols. Further, he could not understand the difference in his early superior and effortless performance and his seeming inability to learn to read. When the functional and emotional difficulties were recognized, the boy was given a course in phonic remedial reading. Now, Johnny can read, but only because his difficulties were recognized early and corrected promptly.

* *The Psychiatric Bulletin*, V, No. 4 (1955), 74-76.

It should not be assumed that only the exceptionally slow children have reading disabilities. Children in all intelligence quotient ratings and in all social strata have difficulty in learning to read. Too often symptoms of reading retardation or dyslexia appear in the later grades and even in college. Indeed, some investigators have estimated that as high as 12 per cent of older school children have some degree of reading disability. Despite the high incidence, dyslexia does not receive from any branch of medicine the attention it deserves. In many instances the factors which interfere with the ability to read can be observed, prevented, and corrected with the help of the practicing physician. Reading disability may be the result of one or many abnormal factors. These include physical and emotional factors of varying degrees of severity, as well as the effects of poor teaching.

PHYSICAL FACTORS IN DYSLLEXIA

With the exclusion of organic brain lesions, there are four major physical bases for dyslexia. These are low intelligence, defective hearing, poor vision, and strephosymbolia. The physician can easily assess the intelligence of the child. Dyslexia should not be confused with alexia, or complete inability to learn to read because of lack of intelligence. Almost any pediatric textbook contains tables that enable the physician to determine roughly the

child's intelligence rating. Actually, children with fairly low intelligence quotients can be taught to read. In most cases of dyslexia low intelligence is not the cause, since mental deficiency is usually recognized before a child is of school age. Similarly, extensive loss of visual or auditory perception will ordinarily be evident before a child enters school. Nevertheless, in instances of profound reading disability, the ability to see and to hear should be ascertained as an integral part of the examination.

A final major physical cause of reading disability is believed by some authorities to be neurologic in origin. In 1926, Orton described his observations on strephosymbolia, a term that denotes twisted or confused symbols. According to Orton's theory, written symbols are confused by persons who are ambidextrous and have no dominant cortical hemisphere. About 75 per cent of the population is composed of right-handed persons whose left cortical hemisphere is dominant. About 12.5 per cent are left-handed (with right cortical dominance), and the remaining 12.5 per cent are ambidextrous and have no dominant cortical hemisphere. In persons with a normally dominant cerebral hemisphere, reading usually engenders no difficulty. In ambidextrous individuals with no stronger right or left cerebral control, written symbols have no obvious order or form. Words are perceived right to left; letters are reversed or misplaced; and even word meaning may be changed. Such persons are mirror writers or readers. Many strephosymbolics can write with equal ease with either hand, either forward or backward.

Many authorities disagree with Orton's explanation of lack of hand dominance as speculative and without definite proof. Although neurologic factors may not explain completely confusion of symbols, such symbol confusion does occur. In a recent survey, Swartout estimated that as high as 10 per cent of the school population may be

affected to some degree by symbol confusion. He also describes a quick and simple test to determine whether strephosymbolia is the cause of reading disability. This test consists of having the patient write a column of numbers simultaneously with both hands. A right or left-handed person will write each column of figures as a mirror image of the other, whereas a strephosymbolic will make his numbers either exactly alike or inextricably confused. Before reading can be learned by these persons, a dominant eyedness and handedness must be fostered and developed.

EMOTIONAL FACTORS IN DYSLLEXIA

There is great divergence of opinion as to the importance of emotional factors in reading disability. Nevertheless, the majority of reading specialists and pediatric psychiatrists agree that reading disability is often an expression of emotional and social maladjustment. Although many problems are involved in reading disability, the most important factors are the child's emotional reactions, poor working habits, and lack of cooperation with others.

Obviously, the emotional and social deficiencies are not caused by reading disability. The child who enters school at the age of six is not unmolded clay, ready immediately to be impressed with the stamp of learning. Instead, the child brings his family problems and his personal problems with him.

The child's emotional reactions are those of discouragement and frustration when he finds he is less competent than his schoolmates. He may have been subjected to a sequence of discouraging experiences with his parents, and inability to learn to read may discourage him even further. Parents may overprotect children at one time and then demand too much at another. The result is that the child loses confidence in his own ability.

Often, children with reading disabilities are overambitious and cease trying when

immediate excellence seems impossible. With consistent failure, a child may ultimately come to believe that he will never learn to read. His discouragement may lead to open defiance or to passive rebellion, in which he flaunts his disability. By a display of indifference, he tries to avoid an anticipated renewal of failure.

Poor working habits frequently contribute to a child's difficulty in learning to read. Many children at the time that they enter school have had no previous responsibilities. Such children resent occasional chores at home, and this resentment may be transferred to all types of work. These children are restless, have a short span of interest, and avoid all activities except those of amusement or novelty. To expect nothing useful of a child for six years and then to subject him to the pressure of classroom discipline and learning is actually to require more of schooling than should be expected.

A lack of willingness to cooperate with others may impede ability to learn. The manner in which a child adjusts to his classmates and teachers is affected by the attitudes and habits he has acquired at home. In some cases, reading disability is an expression of antagonism toward parents and of reluctance to cooperate or to accept direction. Children not trained to observe order will refuse to accept rules or to conform to them. When a child is unwilling or unable to follow directions, there is usually some degree of disturbance in his interpersonal relationships. In most cases, coercion only aggravates the emotional disturbance and the resultant social maladjustment. To the child, enforced cooperation only signifies submission to authority. Forcing him to repeat an assignment until he learns it is thus often defeating. Instead of demanding cooperation, it is better to stimulate motivation. Until a cooperative attitude has been engendered, not forced, the child cannot resolve his deficiencies.

POOR TEACHING FACTORS IN DYSLEXIA

Many parents blame the teacher for their child's inability to read, which results in an additional conflict of which the child may be aware. Also, there is much current controversy as to the merits of the so-called "progressive" method of learning to read as compared with the "old-fashioned" ones. In the earlier method, the alphabet was learned first, then word endings by groups, then the adding of words to make sentences. In the newer method, the child is first familiarized with whole words, so that actual letter recognition comes later and automatically. There is, therefore, less emphasis on the mechanics of words and more emphasis on their meanings. This system appears haphazard and unproductive to many parents. Actually, in most cases, the latter method is superior in resultant reading speed and comprehension. For some children, like Johnny Adams, who are predominantly "ear minded," extra phonetic teaching is necessary. If parents feel that teaching methods are unsatisfactory, there are many ways in which teaching can be augmented by home training.

Home training does not include teaching the child to read. Most teachers prefer that children not be taught before they enter school. Instead, training with words can be really helpful. Since the child learns first by listening and talking, practice in communication will widen his vocabulary. Another form of talking is, of course, story-telling. Whether the parent makes up stories or reads aloud to the child, he enhances the importance of reading and makes the association one of pleasure. Small children enjoy repetition, and word repetition makes them word-conscious. The child's accrued experience is also important and serves to make the things he reads about more meaningful. The parent who listens and answers with real interest all of the small child's questions will add much to that child's vocabulary. If all the

questions about the corner grocery, the zoo, the firemen, and the policeman are answered, many fascinating new words will be learned. Everything, from the label on a can of tomatoes to the directions on a fire extinguisher, can have significance for an inquiring child. By the time he goes to school the child who is home-trained may be able to recognize several common words or at least the association of a word with its object. Talking, reading, and providing the child with new experiences are all forms of teaching that afford a background of knowledge to aid memory. Such memory aids will help to prevent reading disability.

Each child with a reading disability is a separate problem, although in most instances the difficulty may be regarded as a symptom of emotional disability. The neurotic conflicts are non-specific and numerous. Reading retardation is not a permanent and inevitable consequence, nor is it an emotional disorder sufficiently serious to warrant psychotherapy in the majority of

cases. Obviously, the physician does not have time to undertake remedial reading instruction. He should, however, be cognizant of special facilities now available in many communities. Most reading specialists are in local colleges or in the public schools. If the community has no reading specialists, the physician can contact the local school officials and the reading consultant in the state department of education in an effort to add a specialist to the local school staff.

In cases of dyslexia, the possibility of physical disability should first be excluded. In addition, underlying emotional disorders should be recognized. In most cases, encouragement will increase the child's belief in himself. Such encouragement not only helps his reading, but also exerts a helpful influence on his total personality development. In particular instances, as with Johnny, a specific reading disability can be overcome by sympathetic tutoring. With comparable help and encouragement, all the Johnny Adamses can read.

VI

Audio-Visual Aids in Improvement of Reading

AUDIO-VISUAL AIDS

Effective reading in the subject-matter fields is greatly facilitated by the use of visual aids. Half of the space on the pages of first grade readers is given to pictures. Pictures, charts, and maps fill as much as one-fourth of the pages in social studies courses. Specimens, models, mock-ups, instruments, and numerous other aids are used as supplements to the printed pages in the science textbooks. More than 24,000 titles of educational films and filmstrips are catalogued in H. W. Wilson's *Directories of Educational Films and Filmstrips*. Authors of textbooks have selected many 16 mm. films and also filmstrips and recommended their use in correlation with the reading material in books. Bulletin boards, display posters, tear-sheets, and cartoons have been prepared or selected as aids in understanding more accurately the reading assignments in any of the subjects taught in school. Records, tape and wire recordings, and numerous musical instruments are available in most of the teaching fields.

Education has been defined as the process of development and clarification of concepts. The world's information is on the printed pages of books. The student relies upon the use of the printed page for the enlargement and clarification of his concepts. Visual aids are invaluable in making more lucid the thoughts expressed on the printed page. The chapter on the seasons is made much more meaningful through a film which explains them in terms of the position of the earth in its revolutions about the sun; a film showing the community life of rural South American natives makes the assigned textbook chapter on their economic life more easily understood. When the students are tested on the chapter, their average comprehension scores and their rate of comprehension scores will be higher because of the use of visual aids.

Each of the subject-matter fields, including foreign language and literature, lends itself readily to the use of audio-visual aids. The carefully trained English teacher is alert to the use of filmstrips in making assignments, such as the reading of Herman Melville's *Moby Dick*. For example, she will use two filmstrips in making the assignment. One filmstrip will present the characters and high points of the story. A second filmstrip will show forty to fifty parts of a ship with the names of the parts shown on the filmstrip—gunwale, leeward side, crow's-nest, bow, stern, and forty or fifty other parts—so that the reader will have clear imagery of these parts when the words occur in the story. This same alert teacher will not overlook the use of a globe as an aid in charting the travels related in the story or the use of magnetic tape recordings to emphasize some of the dramatic passages. Use of these teaching-learning aids enables the reader to enjoy the book as a story, to appreciate the style of the writer, and, what is more important, to interpret it as an allegory.

One of the more important values of visual aids is in the reduction and prevention of verbalism. Verbalism is the use of words that are not understood. Children

are not very seriously afflicted with verbalism when they enter school and begin to learn to read, because they have learned the words that are in their auditory vocabularies by seeing, hearing, feeling, tasting, smelling, and talking with others. When reading begins, verbalism increases. Many words are learned only as words rather than as conveyors of ideas. Printed words for which they know no meaning, or only a vague meaning, get into their sight vocabularies and hence into their reading vocabularies. These are words for objects for which they have no clear imagery, or for action which they cannot describe. Visual aids contribute much in clarifying word meaning.

High school and college students may experience definite improvement of the basic reading skills by use of 16 mm. reading films that have been prepared especially for high school and college students. The Harvard, Iowa, and Purdue Reading Films are widely used by high schools and colleges. Skilled use of these aids results in significant improvement of comprehension, rate of comprehension, and ability to read in larger thought units.

The chief value of the tachistoscope in reading improvement is the motivation it provides.

Records and magnetic tape recordings are widely used for improvement of oral reading and for increasing appreciation of poetry.

Teachers recognize that commercial organizations, though they are stimulated by the profit motive, have done the research required and have produced large quantities of equipment and materials for use in classrooms to make more lucid that which comes to the mind from the printed page. Free teaching aids are available from many sources. Magazines and newspapers contain almost unlimited numbers of pictures, maps, charts, and cartoons that become valuable teaching materials to the reading teacher who is alert to their uses.

Fears recently expressed that television would counteract reading interest and become a deterrent to more and better reading seem to be unfounded. Rather, according to apparently reliable data, television is stimulating more reading and is aiding young readers to become better readers.

Formerly audio-visual materials were recommended as learning aids for pupils who had not become good readers. Recently a new and broader concept has developed. Their use is not to be substituted for reading. Audio-visual materials are aids to be used to enable all pupils to become better readers.

Visual Aids Can Help Develop Independence in Reading*

Lenora Logan

Many visual aids are being used successfully to help the young reader develop independence in reading. This practice becomes particularly important as children move from the gradual pace of the primary grades to the more rapid pace and more diversified program of the intermediate grades.

By using visual aids, the teacher can improve and enrich the child's learning experiences and thus encourage him to seek information, to select and reject materials, and read critically.

THE OPAQUE PROJECTOR

Teachers are finding the opaque projector a valuable tool for reading readiness in the primary grades or with the slow learners. Materials for projection should be easily accessible and in order. The best results are achieved when illustrations covering a topic are arranged as a unit with a definite sequence. This may be done in several ways. You may stack your mounted pictures or words in the order in which they are to be shown. You may also mount the pictures, words, or story on uniform 8 x 8 cards, and then hinge the cards back and forth in accordion style, so that you may have a useful arrangement of your materials.

* *The Reading Teacher*, VII (December, 1953), 108-10.

Another plan is to fasten your pictures, words, sentences, or stories, evenly spaced, on a long strip of shelf or wrapping paper. This strip is inserted in the projector and moved sideways from picture to picture.

A wide variety of reading material from the reading-readiness through the intermediate grades can be prepared in this manner. When this printed material is projected and the child recognizes his own name on the screen, he becomes interested and wants to learn what the other words say. Directions printed in manuscript may be projected, as, "Good morning, Jim!" "John, open the door!" "Mary, bring me your book!"

A page from a pre-primer or primer may be thrown on the screen and the group read it together. The child who is shy, timid, or slow, experiences success by reading with the group. He enjoys hearing his own voice speaking the words correctly. This gives him courage to try too.

Familiar pictures with key words may be projected to encourage children to tell the story of the picture. These stories may be written on the board and then prepared for screening during the reading period. Reading their own stories from the screen creates and stimulates interest. This story, written in his own words, becomes a rich experience for the child. He can read it. The child has a desire to learn the words

There are dozens of others—posters and shelfpaper “movies,” classroom signs and labels, illustrated experience charts and books, puppets and movies. And of course since the first little red school house, the blackboard has been used as a visual aid.

As with all other aids, these must be used thoughtfully and creatively to encourage the faltering ones, to give color and drama to the apathetic ones, to give confidence and joy to all.

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Teaching Reading the A-V Way*

Hubert J. Davis

Our thinking has long been dominated by the mistaken idea that reading, as a basic tool, should constitute the chief avenue of learning. This has resulted in overdependence on the printed and spoken word as the almost exclusive medium of education—even in the teaching of reading. Reading has become the most *over-emphasized and undertaught* subject in the curriculum . . .

Modern research shows that there are many effective media for learning in addition to the textbook. We have made altogether too little use of the audio-visual media in the teaching of reading as well as in other subjects. However, no one advocates complete substitution of any of these for the printed page . . .

When we consider the broader aspects of reading, the place of audio-visual materials in the reading program becomes more apparent. Reading comprises much more than skills or techniques for assimilation of ideas and words from the printed page. It is not a content subject in the sense that we think of geometry or ge-

ography. It does not consist of a few simple skills to be mastered in the early years of elementary school.

Reading is closely related to intelligence and thinking. It involves doing, growing, and making personality adjustments. It is a continuous process extending beyond school into adult life. Therefore, the teaching of reading should become an integral part of the curriculum throughout the elementary and high school. Teaching reading should be the responsibility of all teachers in all grades.

Reading is closely associated with attitudes and emotions. When wrong attitudes are developed, as they often are by faulty approaches to reading, pupils experience unpleasant emotions and often develop blocks and mental hazards which retard the whole learning process.

Gertrude Whipple, in *Reading in the Elementary School*, says, “Audio-visual aids are helpful at all grade levels. Such aids can be used to build an experiential background to stimulate a desire to read, to give concreteness to the reading activities, and to test the child’s knowledge of what he has read when the same ideas are pictured.”

* *Educational Screen*, XXXI (December, 1952), 417-18, 434.

We cannot force pupils to read, but we can cause them to want to read. Interest and attention provide the basis for all reading. Pupils must have a background of experiences to give real meanings to new ideas and words. Their immediate world of direct experiences, those that result from seeing and feeling and hearing, is necessary for the development of meanings for words and ideas. They need common group experiences to provide common background for successful reading activities. These common experiences in turn lead to individual experiences which provide for individual growth.

Pupils select or reject what they read in terms of its bearing on their purposes and in relation to their background of experiences. Therefore, the fuller their lives and the more successfully they live at home and at school, the better prepared they are to learn to read.

No one piece of equipment or type of audio-visual material may be singled out as best for teaching reading. Each has its own unique contribution to make.

PROJECTED PICTURES

Projected materials—such as motion pictures, filmstrips, slides, and opaque materials—may be used effectively to bridge gaps in pupils' experience and language comprehension. All pupils come to a reading activity with a vocabulary and an abundance of experiences. However, so little of this is common to the whole group that projected materials are needed to provide a common denominator. When projected materials are used, each child may participate in a common experience and each respond to the same stimuli.

Reading activities must draw upon a fund of vicarious experiences. Projected materials, when properly used, stimulate group participation and enlarge pupil experiences through the sharing of ideas and information . . . Motion pictures are especially effective in providing an overall integrated picture. Few people have the

capacity to visualize a whole dramatization or sequence of related scenes when presented through the printed page.

Projected pictures motivate concentration of attention to details. This is necessary for reading readiness. Children love to talk about things they have seen projected and to create their own version of the stories.

With the encouragement and help of educators, producers of films and filmstrips have begun correlating printed materials with projected materials. For example, Encyclopaedia Britannica Films in cooperation with D. C. Heath Company has developed a series of eight text-film combinations intended for use in the first and second grades. These are *Three Little Kittens*, *Gray Squirrel*, *Shep the Farm Dog*, *Farm Animals*, *The Fireman*, *The Mailman*, *The Food Store*, and *A Day at the Fair*. In cooperation with Row, Peterson and Company, EBFilms has also developed a set of film-readers for use at the fourth-grade level. These revolve about children of other lands—*Chinese Children*, *Italian Children*, etc.

These combinations of film and printed text provide excellent common backgrounds of experience and help to develop meanings and vocabularies. Children like them because they afford an easy way to learn new words. The pictures in the books help them recall new words from the narration. The text-films make great contributions especially to the slow learner and to the bored bright child.

Results with the film-readers have been so encouraging that EBFilms has released six five-minute colored films made especially for first-grade reading and is preparing six more on holiday stories. The new five-minute readers that have been released are *Frank and His Dog*, *Jean and Her Dolls*, *A Surprise for Jean*, *Frank Tends the Garden*, *Flying a Kite*, and *Sailing a Toy Boat*.

Among correlated filmstrips and printed texts for teaching reading is the "Alice and

Jerry" series produced cooperatively by Row, Peterson and Company and the Society for Visual Education. Stillfilm, Inc. (Pasadena, California) is also producing a "Better Reading Series" of filmstrips accompanied by a detailed study guide. The Jam Handy Organization (Detroit, Michigan) offers six color filmstrips on "Animal Stories" made for the primary reading program. And other producers of filmstrips as well as films are developing similar types of materials.

NON-PROJECTED MATERIALS

Non-projected pictorial materials, long used in the reading program, have proved their usefulness also in the readiness program. They provide experiences which stimulate oral language development, evoke discussion, develop a desire to talk, and teach pupils how to use picture clues in reading. Visual discrimination may be developed by having pupils match pictures and picture elements, or by having them discuss pictures to bring out likenesses and differences.

Dramatizations enable pupils to put new words into practice, to bring about integration, to emphasize relationships, and to make reading experiences meaningful. Primary children enjoy producing and showing their own "moving pictures" on home-made scroll projectors. They like to make cardboard or finger puppets and use them in dramatizations. Puppet dramatizations may be used in the upper grades to recreate historical scenes and to interpret life in other lands.

First-hand contacts through fieldtrips or with objects and specimens brought to the classroom provide an effective means of helping children to recognize words, to develop clear understanding of ideas, to develop apperceptive abilities, to build vocabularies, and to grow in visual discrimination.

Bulletin boards, flannelboards, and chalkboards are also essential tools. While they are very effective in reading readi-

ness, they are also extremely useful in the reading program throughout the school. Bulletin boards and other display devices may provide stimulating reading environments. Associations of words and pictures through the use of bulletin or flannelboards involve physical and mental coordinations. Their use often provides pleasing emotional experiences. Pupils may use them in matching objects, picking out and matching words with pictures, playing games, and constructing sentences.

Tape recorders and phonographs are indispensable in teaching reading, language, and literature in all grades. Creative stories and dramatizations may be recorded on tape and used later for vocabulary study. Improvement can be checked and measured through recorded tapes. Special radio programs may be brought to class on tapes. The tape recorder may be used to teach proper pronunciation and enunciation. Professional storytellers may be brought to class on tapes and phonograph records.

Maps, charts, diagrams, and original drawings may be used effectively to clarify, extend, or give meaning to readings. They may be used to help organize and summarize materials and to make records of experiences. Diagrams, charts, and maps find more frequent use in the upper grades to summarize and present organized pupil constructed materials. Their use, however, need not be limited to the upper grades.

The tachistoscope is finding wide use in remedial reading. Research shows that the average person sees only twenty per cent of his ability to see and that pupils develop slouchy habits of seeing. With the tachistoscope, pupils are trained to coordinate their brain with the muscles of their eyes, to see objects in wholes, and to rely upon rapid assimilation of visual images. The tachistoscope has made it possible to teach pupils to read much faster, understand what they read much better, and to develop keener eyesight.

Besides all these specific aids to reading, there is a wealth of general and related ma-

materials to use in developing skills and understandings needed in learning to read. Any list of Coronet films contains many examples: *How to Study*, *How to Read a Book*, *It's Fun to Read Books*, *Improve*

Your Reading, *Maps Are Fun*, etc. In fact, practically all well-prepared audio-visual materials on any subject will help in the reading program.

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The A-V Approach to Reading*

Stanley Stahl, Jr.

Paul McKee in the *Teaching of Reading* says, "All language is symbolic. A writer never writes a meaning itself. He writes only symbols—one or more words—that stand for the meaning which he wishes to convey to the reader. No reader ever sees on the written or printed page the meaning which the writer intends to convey to him. He sees only the symbols which the writer has used to represent his meanings. Thus, written or printed words, phrases, sentences, paragraphs, and punctuation marks are only symbols behind which lie, more or less hidden, the meanings that the writer intends."

If the above statement by McKee is studied carefully, the full extent of the complexity of the reading process becomes evident. Perhaps the key to the complexity lies in the words *symbolic*, *meaning*, *convey*, *represent*, and *intends*. Can full meanings as intended ever be expressed on the printed page or interpreted through the process known as "reading"? Scores of texts, pamphlets and articles, many based upon research, have been written to attempt an explanation and clarification of this process.

* *Educational Screen*, September, 1956, pp. 267, 268, 292, 293.

The difficulty can be partially explained by the examination of a few of the many factors that affect the development of reading skill. These would include:

1. The native intelligence and mental ability to comprehend.
2. The attention span of sufficient length to focus upon the problem.
3. The wholesome attitude vital to proper learning.
4. Sufficient background experience and breadth of contacts.
5. Emotional stability to face new situations and trials.
6. Proper environment and atmosphere for growth.
7. High degree of interest.
8. Maturity advanced to the stage being developed.
9. High motivation and stimulation.
10. The process geared to the needs of the individual.
11. Perceptive ability to "see behind" the words.
12. Attendant physical growth and basal metabolism.

In addition to the necessity for the presence of all of these vital learning factors, a whole host of strange and difficult facets of our language must be mastered, includ-

ing consonants, vowels, syllables, prefixes and suffixes, not to mention digraphs, diphthongs, homographs, and exceptions to the rules.

Authorities have long decried the failure of a great number of pupils to learn to read, as evidenced by the large amount of literature in the field. Emmet A. Betts reports that from "8 to 15 per cent of the school population is characterized by varying degrees of reading disabilities." Apparently this is not caused by any widespread lack of basic ability in children. Donald Durrell has found retarded readers among normal and superior children more frequently than among dull children. In fact, he produces evidence that "about 80% of those pupils who were retarded in reading had either normal or superior intelligence." Therefore, as a result of these and many other findings, it must be concluded that in spite of sufficient mental age, many children are not mastering the reading process.

THE AUDIO-VISUAL APPROACH

There are many avenues through which the developmental reading program may be approached, ranging from traditional to modern, from strict adherence to language structure to the experience methods. Probably all of the basic plans have some particular merit when applied to specific jobs. However, no other approach is as fruitful and interesting as that made through the utilization of audio-visual materials. This approach can be based primarily upon a statement that is included as part of the widely accepted classic definition of reading by William S. Gray. He states that "reading includes not only those processes involved in recognition and comprehension but also those involved in interpretation and application." Note carefully the words "comprehension" and "interpretation" for within those two words lies the clue upon which the hypothesis of the audio-visual approach can be based. It is basic, therefore, that language must be viewed as symbolic, must be compre-

hended, interpreted and then applied. Mere recognition of words, through whatever method, is not enough, and, in view of the broad concepts accepted in today's schools, cannot be accepted as a substitute for mastery of the reading process. Through wholesale use of audio-visual aids, it is possible to develop *all* of the essential details of reading skill.

How, exactly, will these aids contribute materially to reading mastery? The following contributions probably summarize this value:

1. They bring to the students a wide variety of rich, meaningful experiences, many of which could not be gained in any other way.
2. They are a powerful and stimulating means of influencing attitudes and developing behavior response.
3. They bring about a leveling or bridging of the inequalities of pupil experiences and environmental influence.
4. They attract and maintain the interest of the learner. It should be noted that these first four contributions parallel directly four of the essential factors listed above as affecting the development of reading skill. In addition, there are many other contributions, including:
5. They give assistance in the development of habits and skills.
6. They are a highly efficient means through which factual information may be presented.
7. Their proper use will help bring about permanence of learning.
8. They can appeal to all of the senses, including feeling, hearing, seeing, smelling and tasting.
9. They help to bring about a high motivation through the use of light, size, color, movement, sound and animation.
10. By proper adaptation, they can be used to instruct large groups at one time.

These claims are very high sounding and widely accepted in theory. Do they prove to be as effective in actual classroom situations? A few random sample reports will show the pattern as reported in the literature, in addition to a brief description

of each type of aid applicable to the reading process.

Film. According to Walter A. Wittich and Charles Francis Schuller, "sound motion picture film represents one of the greatest achievements of the twentieth century. The camera can record and document what it 'sees.' The sound recorder can record and document what it 'hears.' Through the sound motion picture, two of man's primary sensations, seeing and hearing, can be coordinated into a simultaneous record. This record, the sound motion picture film, is an almost living document of things and events which take place in the world."

It is rather easy to see that such a medium can be a valuable aid in the developmental reading process. An example of the value of film in the readiness program is stressed by William Allen, not only as an aid to the children but also as an aid and enrichment source for the teacher. Both the bright and dull child respond to this type of stimulation.

Bette Newell Waltrip reports an enthusiastic reaction to the film-reader material of Encyclopaedia Britannica Films from the teachers in the San Juan School, El Paso, Texas, where the teaching of reading is made more difficult by the Spanish-speaking element. Experimental results after reading-film use showed that the interest and enthusiasm of the entire group was increased, with even the slowest learners acquiring new reading skill. These two examples picked at random from the literature are typical of field reaction.

Filmstrips. The second main group of aids applicable to reading is that of filmstrips. Vera M. Falconer describes the use of this medium as follows: "The group activity purposes, especially in school or college, for which available filmstrips are most suited are (1) demonstration of skills, (2) direct teaching, (3) illustration and (4) supplementary instruction."

Possibly the most widely quoted of the recent articles describing the use of film-

strips for improving reading skill is the experiment reported by Glen McCracken. A planned use of filmstrips was conducted in three first grade classes in New Castle, Penna. Results during the first year showed that all pupils scored at second grade achievement level or better after eight months. The second year revealed even better results. In a different school, the use of filmstrips resulted in a still higher showing. Values claimed as a result of the study substantiate those listed as general advantages earlier in this article.

SAMPLE READING LESSONS

To show in a more descriptive fashion the types of aids that planning can utilize in teaching reading skills, the following typical reading lessons with possible aids are given. The goal of the lesson in each case has been over-simplified for clarity.

These of course are merely illustrative and do not imply the utilization of the materials listed without proper selection, previewing, planning, introduction, presentation, review and follow-up, all of which is the job of any teacher in any reading lesson. This sample list does show, however, that no teacher can lament as to the scarcity of aids for teaching reading, regardless of area, reading level, or even medium.

LESSON I

Task: Initial Consonant Development at First Grade Level

Possible Aids:

1. "Fun With Speech Sounds"
— 11 min. Film — Coronet
2. "Consonant Sounds"
— Filmstrip — Popular Science
3. "Picture Cards"
— Flannel items — Follett
4. "Consonant Lotto"
Game device — Garrard
5. "Speech Improvement Album"
(Consonants G, R, K, L, Th)
— Records — EBF

LESSON II

Task: Use of the Library at Fifth Grade Level

Possible Aids:

1. "Discovering the Library"
— 11 min. Film — Coronet

2. "Your Library"
— Filmstrip — SVE
3. "Library Science"
— Slides — Newark (N.J.) Bd. of Ed.
4. "Peabody Visual Aids"
— Posters — Follett

LESSON III

Task: Ability to Appreciate and Feel the Meaning of Literature — Senior High Possible Aids:

1. "Literature Appreciation Series"
— 6 films — Coronet
2. "How to Read Literature"
— 6 strips — Popular Science
3. "Scenes in Literature"
— Slides — SVE
4. "Aids in Literature"
— Posters — F. A. Owen
5. "Rip Van Winkle," etc.
— Records — Popular Science

Slides. The third area of aids is made up of a great variety of different types, with the total number in use today an impossible figure to project. Irving H. Anderson summarizes their value: "The slide can be used for motivating the pupils and for arousing their interest and curiosity. They can be used to enrich word meaning and for making the words stand for something concrete. They can be used for discussion purposes and for building a language background."

Typical of the many articles describing the use of this medium is the report by Evans and Dennis who describe how a rather dull course was turned into a stimulating experience through the use of slides. Slides were made of the interior of the library, the encyclopedia, and other essentials to reading study skills. Using audience participation and discussion, the instruction was developed into a valuable experience.

Any discussion of slides must of necessity include the possibility of the tachistoscopic technique. Lyle E. Siverson relates how pupils achieved one year ahead of their actual grade after five weeks training with the flashmeter.

Display. The largest group of audio-visual materials is that known as display

materials, under which pictures, charts, cards, flannel materials, chalkboard utilization, and the like have been included. An article giving a general illustration of the tools of this area has been written by Roy D. Willey, in which he gives an insight into the use of these visual materials in teaching communicative skills. He describes the use of charts, bulletin boards, posters, maps, chalkboards, and pictures, telling how each can be used to make classroom learning more concrete.

Typical of the many articles which describe in more definite fashion how a particular display aids is an interesting account by Virginia Johnston. She gives an account of the use of the felt or flannel-board, in which small objects are placed on the background or field. Basic reading skills such as left-to-right sequence, similarities and differences, development of vocabulary, and associating of ideas are but a few of the many advantages.

Opaque projection is another almost unlimited possibility under this classification. Joe W. Andrews gives an example of the possible use, in which children were exposed to material types on 4 x 6 cards projected with the opaque projector. The object was to give the pupils experience with difficult phrase reading, and much progress was noted.

Recordings. One of the more interesting and appealing media, and the last discernible area, is that of recording, including records of various speeds and taped transcriptions of various types. James S. Kinder gives an excellent summary of the possible applications of sound recordings in modern schools, including analysis and diagnosis of speech, appreciation, literature and drama, experience programs, and language training. Included in this group of materials would also be the many possible uses of the radio in the classroom and, more recently, television.

These are but a few of the thousands of reports and descriptions appearing in the literature which point out the increasing

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These are but a few of the thousands of reports and descriptions appearing in the literature which point out the increasing

value of audio-visual materials in teaching the facets of the modern reading program. It must be accepted, on the basis of this wealth of evidence, that such materials actually prove themselves in classroom situations.

SOURCES OF AUDIO-VISUAL MATERIALS

The two major sources for such teaching equipment would seem to be the commercially marketed items and those prepared by teachers themselves.

Commercially Available Materials. Tremendous strides have been made in the commercial production of audio-visual materials. From a small beginning, production has moved so rapidly that it is now virtually an impossible task even to list all of the materials that could be utilized for reading instruction. Although there are many complete indexes of the various types of aids, such as film, there has remained a need for a complete, annotated listing of all materials for the teaching of reading. The author has compiled such a listing for materials in each of the areas of reading instruction such as vocabulary, readiness, word attack, and comprehension. The list has been exceedingly helpful in suggesting possible aids to classroom teachers feeling the need of supplementary and teaching aids.

Teacher-Prepared Materials. To give the impression that the utilization of audio-visual materials in teaching reading hinges upon a vast library of films, filmstrips, records, and the like would be in error. Many teachers, possibly due to the lack of funds or facilities for using commercially prepared materials, and in some cases due to the lack of suitable items, call upon their own ability and ingenuity to produce their own materials. There are some rather definite and desirable characteristics that a teacher should aim toward when faced with the problem of preparation of materials for reading instruction. These would include:

1. The aid must be appealing, using color and esthetic taste.
2. The aid must be accurate in detail and based upon correct concepts.
3. The aid must be realistic and provide a concrete experience.
4. The aid must be appropriate as to need, interest and area.
5. The aid must be concise, instructing in an exacting fashion.
6. The aid must be functional in the area of use.
7. The aid must be well constructed and physically superior.
8. The aid must be constructed so as to facilitate use and storage.
9. The aid must be of proper size and sound to meet the need.
10. The aid must be up-to-date and include no undesirable teaching.

Examples of the many variations of teacher-prepared materials include:

1. Film (usually limited in scope and type).
2. Filmstrips (limited to production facilities).
3. Slides (easily prepared and of a great many types and sizes).
4. Charts (planning, recording, listing, dictionary, experience).
5. Mounted pictures (unlimited possibilities).
6. Flannelboard (objects, letters, forms, shapes).
7. Opaque projections (almost no limit with successful teachers).
8. Card devices and word wheels (words, prefixes, suffixes, letters, etc.).
9. Exhibits (classroom museums, samples, projects).

The literature in the field of audio-visual education and related writings reveals a great number of values attributed to the use of audio-visual materials for reading education. Two of the values seem to stand out as being particularly noteworthy and typical of the findings of research in the area.

(1) Visual aids provide an excellent means for stimulating interest and creating desire to participate in the learning situation.

SUMMARY AND CONCLUSIONS

It has been over ten years since the controversy began over the so-called "army methods" in which a large block of material was given to students in a relatively short time-period, augmented by much use of visual methods. Even today, mere mention of those tactics may be enough to start an argument in educational circles. The fact remains, however, that sustained use of supplementary materials is always reported in terms of progress noted, and articles reporting a reverse trend are exceedingly rare.

(2) Audio-visual aids serve as substitutes for actual experiences, thereby clarifying and explaining many difficult concepts that abstract presentation would not fully explain.

Descriptions of classroom usage of aids in teaching reading, many reporting research studies, are many in number and appear to justify the many values listed for aids. The "audio-visual approach" to reading is an avenue to be given much consideration as educators search for answers to the many critical analyses of the modern reading program.

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How To Teach Reading Methods via the Opaque Projector*

Stanley Stahl, Jr.

Many educators have stated many times that the only limit to the number of uses for the opaque projector is the limit imposed by the teacher's ability. For a number of years the author—first as an elementary principal-supervisor and more recently as a college methods instructor—has extolled the virtues of the opaque projector. It must be admitted, however, that the equipment was not actively being well used. The advantages of the opaque projector were re-discovered in the following manner.

No area or phase of instruction is of more importance than reading. Because of this importance, any methods course in reading given the teacher in training must naturally be of a refined and efficient nature. Not only must the concepts of the reading process be mastered but tech-

niques of instructing the less mature must be presented. In setting up and organizing a methods course in reading, therefore, the author has incorporated a great number of visual materials including films, filmstrips, slides, and charts. After a thorough listing of such materials was made in manual form, quite a few gaps were found to exist where aids were needed to clarify concepts but none were available commercially. To complete and supplement the program, sets of opaque projections were constructed and inserted into the course.

The instructional tasks and the opaque projections constructed included:

Set I: Opaque projection of examples of the various stimuli used by teachers to create within children the desire to learn to read. (6 items)

Set II: Opaque projection of the exercises from a typical commercial reading readiness test. (8 items)

**Educational Screen*, September, 1955, p. 297.

Set III: Opaque projection of pages from a typical commercial readiness workbook. (7 items)

Set IV: Opaque projection of typical reading readiness pictures. (6 items)

Set V: Opaque projection of pages from typical pre-primer material. (8 items)

Set VI: Opaque projection of vocabulary content from a typical reading series. (7 items)

Set VII: Opaque projection of study guides and exercises from typical teacher's manuals to basal readers. (6 items)

Set VIII: Opaque projection of the various types of reading comprehension with examples of material. (8 items)

Set IX: Opaque projection of study guides and exercises for training in the reading study skills. (10 items)

Set X: Opaque projection of criteria to be used in selecting children's literature. (6 items)

The following outcomes and advantages have been noted as a result of the use of the sets.

(1) Many instructional tasks of reading, which need visual clarification be-

fore mastery by the beginning teacher is possible, have not been covered by the presently available commercial aids. These gaps were filled by the above aids.

(2) Class members have been stimulated, through participation in discussion of the aids, to much follow-up study and self-improvement.

(3) Results of examinations given at the end of each course in which the constructed aids have been used reveal that the areas covered by the homemade aids have been mastered to at least the same extent and usually to a higher degree than the areas covered by commercial aids. Out of 150 examinations, less than 10% of the students failed to give satisfactory statements for essay questions covering the concepts covered by the ten constructed aids.

These constructed aids were inexpensively made, are easily stored and are available exactly when needed, with no scheduling or budgetary problems. Due to their successful use, additional sets are planned to be substituted for several inadequate aids presently being used.

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The Tape Recorder: an Assistant Reading Teacher*

John J. Hamilton

A suggestion made in the audio-visual laboratory at the University of Southern California gave us an idea which we adapted first to meet the needs of the

* *Teaching Tools*, III, No. 1, 7-9, 17.

reading lesson. Why not tape record directed reading lessons for the slow learners so that their follow-up activities might be more carefully guided? Close attention could be given to each pupil's needs as

the lesson was being prepared. Pictures, filmstrips, and children's own illustrations could be related to follow up the basic skills in the directed reading lesson. Libraries have listening posts with tape recorders. *Why not adapt this idea to fit our reading needs?*

While Mrs. Hamilton was busy gathering ideas to put on tape, the mechanical man of the family began to assemble the equipment. A secondhand tape recorder of satisfactory quality was purchased for thirty-five dollars. We obtained high-fidelity earphone head sets from an electronics surplus store for a little over three dollars per set. A few telephone plugs and jacks and some sheet iron completed the materials necessary.

The sheet metal was folded and soldered to form a box 4"x4"x10", in which we mounted the jacks in a parallel circuit. The box will receive from one to twelve headset plugs, and when the lead wire from the junction box is plugged into the tape recorder, the audio circuit is automatically cut off from the speaker and is fed through the earphones. Thus, a group of children could listen to a taped lesson without disturbing the other children in the classroom. While we were at this job, we also wired the transcription player in the same manner so that, on occasions, commercially prepared discs might be used by one group while another used the tape recorder.

While the equipment was being tried out, Mrs. Hamilton's enthusiasm was mounting. It became evident that other teaching aids could be used to augment the lessons. For example, filmstrips have been prepared which are integrated with the basic reading texts. These fortify skills and present material when firsthand experiences might not be practical. Children can be taught to turn on the projector, which has been previously set up, and to turn to each new frame upon directions heard through their earphones.

Of course, Mrs. Hamilton did not lose sight of the original purpose of this medium, which was to provide directed assistance to each pupil when she could not be with them in a reading circle. For that reason the needs and abilities of the children, particularly of the slow readers, were carefully analyzed and the lessons prepared to strengthen needed skills.

Drills in particular skills, such as phonetic analysis, are outlined. The directions and questions are so framed that the natural responses stimulated are the correct ones. Every attempt is made to avoid the chance that a child might practice an error. Furthermore, when the children play back the tape they hear their teacher's voice which is as familiar to them as though they were in the reading circle. The directions they hear refer to the reading aids in a purposeful manner, and their responses are written on carefully prepared work sheets which are always checked, with the children, for progress.

The second classroom teacher had been found. How did the children react to the idea? We wish you could have seen their faces and watched their serious but happy responses. At first they were timid, not knowing just what to expect, but before the first lesson was finished they knew how to proceed and were bubbling over with enthusiasm. It was needless to try to limit the use of the recorder, and all reading groups soon had their turn with lessons prepared specifically for each.

It is fun to watch them work. Sometimes they make oral responses to questions they have heard over the earphones, but this does not seem to interrupt the other groups which are busy with their own work.

What form do the taped lessons take? We know that the experienced teacher will easily visualize the techniques, methods, and ideas which might be put on tape. For those who might not fully understand, the accompanying sample of a script (to be recorded by the teacher)

may be helpful. The children's work sheet reproduced on page 17 accompanies the recording.

Dark Pony

"Jerry, would you be the leader for your group today? Would you please see that everyone has a worksheet and a pencil? Boys and girls, these are the only things that you will need, except your eyes and ears, which are very important!

"If everyone is ready, let's begin. Yesterday, in our reading group, we read the story of Dark Pony. We enjoyed the story so much, I thought you might like to see it as a movie story. So I picked out the main parts of the story and put them on our movie. The parts are numbered, and you will find a number on your worksheet for each number on the movie story.

"Jerry, please turn the movie to the picture. Look at this pony. He is like the pony we saw in our story yesterday, isn't he?

"Now turn the movie to number one. Everyone read the sentence to himself.

(pause)

"Something in the sentence tells us that more than one child went to Sleepy Town on Dark Pony's back. Look at your worksheet, number one. One of these three words says more than one. Draw a line under the word which means more than one.

(pause)

"Does 'night' mean more than one? Does 'Town' say more than one? Does 'many' mean more than one?

"Yes it does. If you drew your line under the word 'many,' you have number one right.

"Now turn the movie to number two. Boys and girls, read the sentences to yourselves.

(pause)

"Now look at number two on your sheet. You find the very same sentences there, don't you? Read them again to yourself.

(pause)

"One of the two sentences tells *why* the children called him Dark Pony. There were

two reasons. Draw a line under all the words which tell us *why* the children called him that name . . ."

Soon the tape recorder was put to use for other classroom needs. Arithmetic lessons were prepared for those who needed additional guided drill. The spelling lesson created a new interest in an otherwise dull drill. When the children recorded songs and heard them played back, they were so excited they almost burst.

One subtle lesson was quietly accomplished when a boy with slovenly speech habits was given the privilege of recording a story. After the playback, he was the first to realize that some of the words couldn't be understood. With this motivation, he has practiced to improve his speech.

The tape recorder has been well used in the social studies, too. When a local policeman visited the class to initiate a unit in "Our Friend, the Policeman," his words were preserved by the class for later and frequent reference.

Of course the tape recorder has long been used in situations like the above, and is not new to most teachers. Our particular benefit in using this equipment with earphones, however, was to obtain the extra teacher guidance when time was precious and when the teacher just couldn't get around to all the children who needed her help. The pupils' initial interest in the new idea seems not to have lessened with its continued use. We believe that by varying the type of experience with each lesson, by not running a good thing into the ground, and, most particularly, by *fitting the lesson to the needs of the children*, the value of the "teacher's helper" is evident to the pupils, themselves.

Some Experiences with a Tape Recorder*

Walter C. Daniel

The use of a tape-recorder as an audio-visual aid in elementary school extends far beyond the uses mentioned in early writings on the use of such materials in the classroom. The ease with which recordings are made, the effectiveness of immediate play-back, and the erase-record feature of most standard models make their uses legion and valuable.

One of the most fascinating additions to the classroom teacher's equipment is a tape-recorder to be used as a *tool* in the teaching of reading. The experience in hearing one's own voice is still novel enough to bring flushes to the faces of adults. And to the elementary school child, the experience is little short of captivating.

This article is intended to report some reading experiences which the writer used with a fifth grade class and a tape-recorder. The class presented a highly varied degree of reading proficiency, and for that reason, the experiences reported here vary in procedure and purpose. Below is a description of some of the methods of using the recorder as a tool for teaching reading skills.

1. *Aid in Word Recognition.* The tape-recorder can be used to help low reading groups recognize words in a story. For example, use a story which has several characters. After the group has been introduced to the names of the characters—which might be the names of animals—each child may follow the

story and read the speaking parts or act the part of the story which relates to the character whom he represents.

2. *Forming New Words.* In the formation of new words from a root word—an integral part of the reading program—the spoken word form is most important at the time that the new word is introduced. A child begins to establish "ing," "ied," "ed," and other prefixes and suffixes well when there is an objective measurement of his audio-visual concept of the new word form. With the tape-recorder he says the word in order to establish the proper pronunciation, being made to realize that the meaning of the word depends upon its pronunciation in many of the new forms.
 3. *Attacking New Words.* The recorder becomes a clinical instrument, diagnosing with unquestionable accuracy the manner in which a child attacks a new word. From this record, the teacher is able to know the extent to which he has mastered the all-important skill of a successful approach to pronouncing a new word. This use of the machine carries over into exercises in syllabication and the "rhythm" of poly-syllable words.
- In addition to the above-mentioned uses of the recorder in the reading program of a fifth grade class, there are certain other areas of the reading program which can profit by the use of the machine. Some of the specific concepts are mentioned below.

* *Elementary English*, XXX (November, 1953), 427-28.

1. *The Direct Quotation.* Although punctuation marks may be equal to the task of teaching recognition of direct quotations, the class whose activities this article reports needed something more for help. Through the use of a "proctor" and characters, the class was able to realize the parts of the story which are actual conversation. The "Proctor" read the parts of the story which were necessary to be known, exclusive of the conversation.
2. *Organization of Facts and Ideas.* The logical or most desirable order of facts and ideas in a discussion, a procedure, a story, or a report can be accurately measured, reconsidered, and altered by use of the tape-recorder, rather than by relying exclusively upon the process of editing written work. The class, or group, listed its points of interest, and then heard them played back, while a logical sequence was made.
3. *Onomatopoeia.* The Greeks had a word for it, and so do the philologists, but can the teacher explain this word art to a fifth grade child? However, there is a desire and a need on the part of the teacher to demonstrate the relationship between certain words which describe and their sound—diction which can resemble the sound of the thing signified. Moreover, this method helps to vitalize language by the adaptation of a

vocal pattern in reading aloud which states a mood. In this method adverbs are used widely in stories, sentences, and expressions to tell *how* a thing was done, *how* some words were said, or *how* someone looked.

4. *Observing Punctuation Marks.* The functional purpose of a comma, period, colon is taught easily. It is easier to see that these marks are really important in reading comprehension. The proper "reading of punctuation marks" is a valid help in reading skill. This use will also include the proper oral inflection for questions and exclamations.

This writer has not attempted to set forth any new and profound methods of teaching reading. The whole point has been to report in some understandable fashion some experiences which a class and its teacher have had in using the tape-recorder to intensify many of the time-honored and universal methods of offering an enriched program of reading to a middle-grades group.

Since many persons are buying tape-recorders of their own, and many school systems are adding them as standard equipment for elementary schools, it is felt that some attention might be given to effective uses of them.

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Tachistoscopes and Their Use*

George E. Hamilton

The tachistoscope was originally developed as a device for accurate measure-

*From James S. Kinder and F. Dean McClosky, *The Audio-Vinyl Reader* (Dubuque, Iowa, William C. Brown Co., 1954), pp. 151-54.

ment of the span of apprehension. Sir William Hamilton, in 1859, did the first crude experimental work on the problem of the number of objects that could be perceived at one glance. Up to that time

the problem had been considered one of a philosophical nature and had been disputed. Hamilton exploded the existing theory of a fixed span by showing it was a matter of individual differences. The first step toward experimental control was taken by Jevons in 1871. For the purpose a number of black beans were thrown into a small box. The moment the beans came to rest, the subject was to estimate their number. Jevons' results showed a steadily declining curb in apprehension span as the number of objects presented was increased.

The principle of the tachistoscope was first employed for the purpose of discovering how brief a stimulus could arouse this sensation. In 1895 the apparatus was adapted by Cattell for use in span and reading experiments. It was Cattell who laid the groundwork for both experimentation and training in the field of reading and reading problems. Dodge, Kutzner, Fernberger, Freeman, Glanville, and Dallenbach have all contributed work to various phases of the problem.

Miss Catherine Aikin, teacher in a private school for girls at Stamford, Connecticut, wrote a book in 1895 that created much skepticism and controversy among psychologists and educators. She had become greatly disturbed about the fact that her students seemed unable to use their minds properly, and in her book she advocated a method of instruction to provide this training. Her basic assumption was that ambition and a desire to excel would lead toward stimulation of the mental activities and permit one to concentrate his attention sufficiently to insure retentive memory.

The method she advocated involved the use of a revolving blackboard upon which materials could be placed for observation, and then the observer repeated what he saw on the board. She claimed that it was possible to place a series of numbers on one side of the blackboard, expose them to her class for three seconds, and then ask the pupils to repeat the numbers after

multiplying, dividing, or extracting the cube root of each number. Use was also made of circles, algebraic formulas, unfamiliar words, parts of a sentence or paragraph, bars of music, various line lengths, and models to be used in drawing. This mind-training exercise was given for twenty minutes at the beginning of each morning's work.

In spite of the fact that many persons expressed doubt as to the validity of her claims for the method, one can see in it the background of many of the present-day aspects of tachistoscopic training. She was concerned primarily with the development of habits of quick perception, accuracy of perception, and ability to discriminate quickly.

Prominent among contemporary psychologists interested in tachistoscopic training is Dr. Samuel Renshaw of Ohio State University. Because of his interest in the field of recognition training, the Navy Department requested that he establish a program of tachistoscopic training in aircraft and ship recognition for service personnel in World War II. This training proved impressive to the naval authorities and was continued by the Navy throughout the war.

The Keystone View Company ran its first study on the use of the tachistoscope in the teaching of reading in the Harding School, Erie, Pennsylvania, during the winter and spring of 1938. Since that time there has been a constant development of equipment, materials, and methods of use of the tachistoscope in education.

The first great advance in this project came with the development of the Keystone Overhead Projector. This made possible the use of multiple exposure slides instead of using an entire slide for one word, phrase, or number as was necessary in the conventional type of slide projector, whether for standard or for two-inch lantern slides. It now became possible to print from sixteen to eighteen and later forty

exposures on one slide, each exposure appearing on the screen at exactly the same spot when flashed. Up to the time of this development, the use of the tachistoscope dragged. The expense of handmaking and buying 1000 or more slides, which seemed to be a minimum necessity, seemed prohibitive to buyers; and where such a collection of slides might be secured, its filing and use were cumbersome and forbidding.

THE PRIMARY PURPOSE OF TACHISTOSCOPIC TRAINING

The tachistoscope is primarily a device for perceptual training. A tachistoscopic flash on the screen may be defined as a flash that does not permit eye movement within the object or objects to be recognized. It is generally accepted that such a flash must be $1/5$ of a second or less in duration on the screen.

It is obvious then that a tachistoscopic flash is something entirely different from the exposure of flash cards by hand. It would hardly seem possible that anyone could expose a flash card within the time limit given above as tachistoscopic.

A fundamental difference between perception as it occurs in connection with the use of a flash card and perception as it occurs in the case of a tachistoscopic flash is that perception is likely to occur while the flash card exposure is in view, whereas in the case of a tachistoscopic flash perception necessarily follows the flash. It is important, therefore, in the first steps of tachistoscopic flashing that the student be instructed to hold this vision on the spot where the flash occurred until he is able to reconstruct mentally the entire form or group of forms to be recorded. At first the period between the flash and recognition may be relatively long. As training proceeds, this period is shortened until the trained and skilled tachistoscopic observer may bring the point of recognition up very close to the point of flashing.

Another very important aspect of tachistoscopic seeing is that the observer will

see the subject matter flashed as a whole and not in parts. This has sometimes been termed holistic seeing. In the recognition programs conducted for pilots and other personnel in the Army and Navy during the last war, it was observed that when a student was able to recognize a plane in $1/100$ of a second he could usually reconstruct the plane with amazing accuracy in all details. In fact, this was an essential aspect of the training since the close similarity of some American and certain enemy planes made it important that a pilot flying at high speed and meeting a plane coming toward him at high speed be able to recognize instantly and accurately small differences that might designate the plane as either a friendly or an enemy plane.

In the use of the tachistoscope in teaching spelling, a similar fact has been observed. When the student can recognize in a flash of $1/100$ of a second a difficult word, it has been observed that he usually will be able to spell that word correctly. In the case of large numbers likewise it has been observed that when a student can name all the digits in the number he usually is able to record those digits exactly in the order in which they appear on the screen, whereas in the case of slower exposures the student frequently can name all the digits but will give some of the digits out of order.

A third important possibility of tachistoscopic training is the enlargement of the operating form field of the observer—the extension of the form field of the observer to take in a large territory. The extension of the form field of the observer may be in no sense a physical phenomenon but is probably purely perceptual. It would seem reasonable, therefore, that the form fields of various students might be developed but with different possibilities. The most obvious indication of this possibility is the extension of a student's possibilities in the recognition of large numbers. Most people can recognize immediately four digits in a flash of $1/100$ of a second. A fair number

of people can recognize five digits on the occasion of their first experience with the tachistoscope. A few can recognize six digits. But after a period of training, let us say fifteen minutes a day for six weeks, most of these students will be able to recognize double the number of digits they were able to recognize at first in a flash of $1/100$ of a second. What has occurred in the meantime must be in the nature of the development of visual perception. The form field of the student has been enlarged and in general he will see more of any design on the screen or be able to read at a given flash a larger number of digits or a longer phrase on the screen than he would have been able to reproduce at the beginning of the training period.

It would seem, therefore, that the place of tachistoscopic training in the schools is basic. Whether the student is being taught the elements of design in art, to be a more effective reader, to become a better speller, to read music faster and more accurately, or to increase his speed in typewriting, what tachistoscopic training is doing for him is to provide him with better perceptual skills so that normally whatever he does in any of these fields is done, as training proceeds, with greater accuracy. . . .

APPLICATION TO THE READING PROBLEM

Educators have long recognized the importance of adequate visual functions in good reading. The student cannot be expected to read something that he cannot see at all or that he cannot see well. Even the myope, who is often referred to as an exception to the statement that good vision is related to good reading, can well be said to have good vision for reading. His visual difficulty is merely one of seeing or reading at distance. In general it would seem that basic functions of seeing would be necessary to the rapid perception required in the use of the tachistoscope.

It is generally conceded that rapid reading and effective reading go together. If

our assumptions presented above are correct, the student who is able to see a phrase and read phrase after phrase in tachistoscopic timing will not only be getting quick perceptions of such phrases and, therefore, reading rapidly, but will likewise be getting accurate information from what he reads. From tachistoscopic training he will enlarge his form field and thus be able to increase his span of recognition and, therefore, the length of his phrasing as he reads. Thus the student becomes a more rapid reader with an equal or better index of comprehension.

The statement has been made by many users of the tachistoscope that all students should have tachistoscopic training. These students may be divided into two classes. First, there are those students who either because of their initial steps in learning to read have not acquired correct basic skills or have acquired certain wrong habits of reading or because of some emotional or psychological factor are poor readers. Tachistoscopic training has been found very effective in aiding both these groups to become good readers. Such training is usually designated as remedial-reading training.

The second class of students who may profit by tachistoscopic training are all others. These students have, let us say, fairly correct reading habits and have no emotional or psychological blocks to good training. However, the use of the tachistoscope, especially in the lower grades, where reading habits are being formed, will presumably make of these students faster and better readers. In many cases the reading rate, sometimes with no other device involved, has been doubled . . .

TACHISTOSCOPIC TECHNIQUES

In using the tachistoscope for perceptual training, it is important to observe carefully four steps in the exercise:

1. The group should be prepared for the material that is to be flashed. They

should not only be told its nature—that is, whether it is a picture of a plane, a word, a phrase, or a certain number of digits—but the place where the projection will appear on the screen should be clearly located. Then the instructor should say something like “Ready—one, two.”

2. The flash.
3. The student should be instructed to wait a brief time and then try to re-construct a mental image of the picture or subject matter flashed.
4. Then he is ready to check on his work sheet, write down, draw, or repeat orally the things that he saw.

It is very important that the instructor observe these four steps as separate from each other. The results will undoubtedly confirm the wisdom of having done so.

Start with slow flashes when necessary and gradually build up to a flash of 1/100 of a second. Then do all further training at this speed unless otherwise indicated in specific situations.

It seems reasonable, also, to begin with nouns, since such words out of context have a large factor of meaning to aid in recognition. Next go to Dolch's sight words, which when standing alone have less meaning than nouns. Then flash phrases—which have a high ratio of meaning—to help cover a wide span. Finally flash numbers—which are low in meaning—thus placing a high requirement on the visual recognition of form.

In the case of young children who do not know letters or numbers, or of illiterates, outline pictures of animals or geometric figures may be used.

THE THREE STAGES OF TACHISTOSCOPIC PERCEPTION

It is important that the instructor thoroughly understand the three stages of tachistoscopically controlled perception.

1. The first stage is the period of preparation. One learns in proportion to his preparation for learning. Both the stu-

dent and the instructor should thoroughly understand the following conditions prerequisite to high achievement:

- a) He must want to succeed.
 - b) He must be “set” to reach out for the impression as if he were going to grasp it with his hands.
 - c) The total body posture must express “readiness,” because posture affects the response.
 - d) The mental attitude must be one of eager alertness.
2. The impression period begins at the instant of exposure and extends to the point where the imagery has attained mental reproduction. This period of reception and interpretation lasts at first from three to five seconds. As learning proceeds, the necessary interval becomes less and less until finally interpretation follows reception instantaneously. Any overt activity during whatever interval is necessary will greatly hinder the process of recall. The student should not attempt to record until he has a mental picture of what he saw on the screen.
 3. The response period is the interval necessary for the completion of the motor (efferent) activity following perception, just as the impression period is that of the sensory (afferent) and organizational (integrative) phases. The response period consists of giving form, oral or written, to the thing perceived. The motor activity required for the recording of the response should be as nearly as possible automatic, that is, it should be accomplished without conscious attention, in order that the integrity of the recall may not be impaired. If attention is focused on the mechanical execution of the act of recording, the impression may be blurred or erased.
- Hence it is important that the manner or recording involve only the use of well-established skills. For example, if the writing skill is so low as to demand special attention for its execution, it may be better to have the student report orally, or vice versa.

RECORDING RESPONSES

The activities involved in recording the response produce effects significant for perceptual achievement. When the student writes "1 3 6 4" in his notebook after seeing these numbers on the screen, several things happen.

1. He visually perceives the numbers a second time. This acts as a repetition of the original stimulus and confirms and reinforces the mental percept.
2. The muscular tension consequent upon recording the numbers sets off discharges in the proprioceptive receptors located in the participating muscles. These neural discharges act as efferent stimuli and contribute to the reinforcement of the mental imagery, constituting, in effect, a sense of touch, permitting the subject to "feel" the numbers.
3. This process of "feeling" involves co-ordination of the sight and touch continua, and is an important factor in all learning situations.
4. Granting that the requisite mechanical skill, oral or written, is present, the manner in which the recording is done becomes informative of the accuracy of the mental reproduction. If perception is unitary, that fact will be evidenced in the facility and preciseness of the recording act. If there is vacillation, hesitation, or fumbling in the recording, such manifestations reflect what took place in the brain.
5. Likewise when the report is given orally, the same effects are produced through the proprioceptive receptors located in the vocal and auditory organs, and rapport is established between the visual and auditory senses.

PRELIMINARY INSTRUCTIONS TO THE STUDENT

The preliminary instructions that you gave the student will determine to a large extent, the failure or success of the training session. The following instructions should be carefully observed:

1. The student is to be mentally alert and not muscularly tense.

2. The student is to be seated so that he can maintain a normal posture, with both feet on the floor and bending slightly forward. The postural set should be toward the screen.
3. The student is to be supplied with a notebook in which he may record the results of all exposures. He is to record the correct material opposite any error so that he may observe the type of error he has made.
4. He is to be instructed to observe but not to attempt to read the material during the impression period, either silently or aloud. All postural movements should be eliminated just prior to, during, or after the flash. Eye movements or postural movements performed too quickly after an exposure will tend to create errors.
5. He must be instructed not to start recording his observations too soon after the exposure but to allow a waiting period of from three to five seconds before recording.
6. The student should be made thoroughly familiar with the procedure of recording and rating his observations. It is customary in grading tachistoscopic training with digits to allow one point for each correct observation and one-half point if all digits of the number are correct but two of the digits have been reversed.
7. The student is to be shown by a trial flash the exact location of the proposed flashes on the screen. A fixation target should not be used.
8. He is to be instructed precisely as to the content and length of the material to be presented. For example, "Now we shall flash a number that has five digits."

VIEWING HEIGHTS AND ANGLES

The material should normally be projected at the height of the student's eyes.

A viewing angle of more than thirty degrees is not desirable. The following table gives the maximum displacement of the student from the line of projection (an imaginary line drawn through the instrument to the projected point on the screen)

in order not to exceed the thirty-degree angle of viewing:

Distance of Patient from Screen (in Feet)	Off Central Distance of Patient (in Feet)
5	3
10	6
15	9
20	12

FACTORS IN PROGRESS

A sense of frustration should not be allowed to develop. Nothing is more inimical to progress than the feeling that "I know I am not going to get it right." Success, on the other hand, creates confidence.

"In any learning enterprise the assumption of a defeatist attitude actually sets in motion the postural and implicit movements which conduce to erroneous and failing acts."—Renshaw

It is therefore of first importance to present material that is not beyond the student's present capacity. If, for example, he can get five digits but cannot get six in 1/100 of a second, reduce the speed, or exposure time, until he can reproduce correctly the higher number of digits. Then gradually increase the speed to 1/100 of a second without informing the student of changes in exposure time.

The jumping digits are most effective in raising the achievement level. Their use will markedly accelerate progress.

Let us again stress the importance of keeping all stimulus demands within the student's ability to achieve. Speed follows correct reproduction in all forms of training. Avoid, as much as possible, wrong responses.

LENGTH OF TRAINING PERIODS

Neither in the school nor in the eye specialist's office should any training period be extended to the point where the students are fatigued or show lack of interest. Experience has shown that a training period of from ten to fifteen minutes usually provides sufficient time in which to achieve desired results and, at the same time, does not go to the point of frustration and defeat . . .

RECORD RESPONSES

In the group training the only practicable method is for each student to keep a written record.

The record should be permanent so that progress may be checked periodically. The student's interest is also heightened if he is allowed to keep a complete record. The record should include the date, the speed of exposure, and the number of letters, words, or digits projected. Complete, informative records are important—to the student as a source of instruction and satisfaction, to the instructor as a measure of progress and the effectiveness of procedures employed.

We Obtained Reading Improvement with the Tachistoscope*

Lyle E. Siverson

We tried the tachistoscope to see if we could get some reading improvement in a class of eleventh grade students in an unsectioned English class at Compton High School; but let me tell you about it.

What is a Tachistoscope?

The technical definition of a tachistoscope is an apparatus which exposes to view an object or a group of objects for a selected brief period of time.

In practice this usually means a slide projector equipped with a device on the lens barrel which can be set to cut off the picture after a given length of time. Thus, if the timing device were set at $1/10$ of a second, the slide would show on the screen for that long and then flash off. One of the most common ways to do this is with a shutter similar to a camera shutter which can be set for $1/10$, $1/25$, $1/50$ of a second and so on. This is the method employed by the Keystone "Flashmeter," the device we used in our class. Other types of machines use different methods to achieve quick exposures, but the results are the same in all cases—the person viewing the screen has to look intently at the screen in order to figure out the nature of the image which is flashed in such a short period.

The Air Force introduced me to the tachistoscope in a classroom where we

were being taught aircraft recognition. It was essential for airmen to be able to recognize aircraft and ships at sea immediately. It was essential to see the whole object and not just a part; to see it all in one fixation of the eyes. To help us learn to do this, the Air Force instructors used a tachistoscope which flashed silhouettes on the screen at varying speeds. At first these flashes were timed at $1/10$ of a second and we could hardly recognize any of the targets. We couldn't recognize them because we would first look at the front of the aircraft, the wings, the tail and before we got that far, the picture was gone. *At $1/10$ of a second there isn't time for three fixations of the eyes.* And as the speed of the flashes increased to $1/50$ and $1/100$ of a second, there was time for only one fixation of the eyes. Gradually, without conscious effort on our part, we learned to look at the whole object; to see the thing "all at once or nothing at all." Ultimately most of us were able to identify the targets within ninety to ninety-five per cent accuracy at $1/100$ of a second.

When our school district purchased a tachistoscope to be used in the remedial reading lab, I was anxious to try it in the classroom. It seemed logical to me that if we could be helped to recognize aircraft quickly and accurately, students could be helped to recognize words and phrases quickly and accurately.

* *Teaching Tools*, I, No. 4, 172-76.

During the summer school session when I was teaching two classes of eleventh grade English in which the content was essentially American literature, I used the tachistoscope in an effort to promote improved reading skill. There were thirty-three students in one class, with twenty-one students in the other. The classes met for a period of six weeks for two hours each day. The tachistoscope was used for ten to fifteen minutes each day for a period of five weeks.

THE PRESENTATION

Use of the tachistoscope was presented to the class on a suggestive basis. The first day an over-view of the course was presented in respect to the literature that would be covered with emphasis on the amount of reading involved.

The problem of reading ability was discussed with an attempt to bring to their attention the wide variation in reading ability found in any group of people. They were told that poor reading ability was not an indication of low intelligence; that many intelligent people were poor readers merely because their eyes had never "caught on" to the mechanics of reading.

They were told of the manner in which the Air Force used the tachistoscope to train airmen to use their eyes better. They were told that the school had purchased a tachistoscope and that it was available for classroom use.

Their interest was aroused. Americans are said to be "gadget conscious," and they were typically American in that respect. They were anxious to see it and to try it. After one trial they were eager to go ahead with the project and it was decided that for ten to fifteen minutes each day we would devote some time to using the tachistoscope. The remainder of the two hour period would be devoted to the regular study of American literature.

THE TESTING

The first step was a reading test. It was felt that we would want to know if any

progress was made, and the only way to do that was to test before and after use of the tachistoscope. The students were given the Iowa Silent Reading Test, Form CM, for the initial test and five weeks later they were given Form DM of the same test. In that way a relatively accurate measure of their progress was recorded.

THE PROCEDURE

Procedures used in the class followed the directions which come with the Keystone Slides and the Keystone Flashmeter. The first few sessions were devoted to Primary Forms and Geometric Forms which were flashed on the screen at slow speeds at first and then at gradually increased speeds. The object here was essentially to get the students accustomed to looking for the flash as they looked at such simple objects as a rake, shovel, doll, square, or triangle. Visual Spacing slides were next. They utilized numbers two, three, four, up to seven and eight digits. The object here was to train the eyes to see many numbers at one fixation and to increase the span of sight. After six or seven sessions shorter words were shown followed by longer words, phrases, and finally, sentences with the targets being flashed at increasing speeds.

It was hoped that this use of the tachistoscope with the progressive use of the prepared targets would bring about improved reading through better attention, more rapid eye fixation, increased span of apprehension, and proper left to right fixations.

No other instructions in reading skill were given with the exception of suggestions to do the regular class reading assignments under pressure. The students were advised that due to concentration their comprehension would perhaps be better if they tried to hurry; that thought comes to us through phrases and groups of words, not individual words. It was suggested that slow reading was often the lazy person's excuse to day dream and

an invitation to think about something other than the thought content of the material being read.

THE RESULTS

At the end of five weeks these were the results after a comparison of the initial and final tests. Note that almost half of the group (24) reached the grade placement level of 13 in a class made up of students who had just completed the tenth grade and were attending summer school.

NUMBER OF STUDENTS AT THE VARIOUS
GRADE LEVELS AS REVEALED BY THE
IOWA SILENT READING TESTS

Grade Level	Pre-Test	Final Test
5	2	0
6	5	1
7	8	2
8	7	4
9	8	6
10	6	3
11	3	8
12	2	4
13	11	24

The class of twenty-one students had a median grade placement score of 8.8 on the initial test which would place the class *two years and two months below* its actual grade. On the final test, after five weeks of work with the tachistoscope, the median grade placement score was 12.4, which would place the class *over one year ahead of its actual grade*. Phrased another way, the median of the class in the total reading score based on speed and comprehension revealed a gain of three years and six months. On the basis of percentile scores the median gain was twenty-four points.

The class of thirty-three students had a median grade placement score of 9.6 on the initial test with the median moving up to a grade placement score of 12.7 on the final test. The median percentile gain in this class was nineteen points.

Probably the most surprising result was the evidence that *all ability levels were*

able to profit from the experiment. When the fifty-four students were divided into lower, middle, and upper quartiles on the basis of the initial test scores, some interesting comparative gains were revealed. The top quartile had a median percentile gain of 15.2. The lower quartile showed a median percentile gain of 17.3 with the middle fifty per cent revealing a median 23.7 percentile gain.

Some of the individual grade placement gains support the conclusion that significant improvement came at all levels. Helen had a g.p. score of 6.8 on the initial test with a 9.0 score on the final. Pat gained from 7.9 to 13.0; Alf from 7.9 to 11.1. Josephine was the lowest ranking student in both classes with a g.p. score of 5.2, but she showed the greatest gain with a g.p. score of 11.3 on the final test.

Evidence of gain in the middle group was satisfactory. One student advanced four grades in grade placement; six students revealed a gain of from 3.0 to 3.9, with nine students gaining 2.0 to 2.9 in grade placement. Six students gained from 1.0 to 1.9, with only three students in the middle quartile indicating a gain of less than one year in grade placement. This middle group showed the most consistent gain of the three groups.

Grade placement scores reveal little of the story for the high ability group because the test stops at the g.p. score of 13.0, and eleven students scored that high on the first test. Was this reading improvement program a waste of time for that group of eleven students? The median gain in percentile scores for this group of students was 15 points, which is certainly significant. In looking at individual cases some interesting factors were observed. Duane had the same score on the initial and final tests; he was at the 95th percentile. Yet his rate of reading increased phenomenally with no apparent loss of comprehension. Time checks during the five-week period clocked him reading as high as 1030 words per minute and he con-

sistently read at speeds of over 800 w.p.m. Reading at these speeds he was at the top of the class in comprehension checks which were given following exercises. Other examples of students who were in the upper quartile in reading ability at the start of the project revealed substantial gain. Ronald went from 53rd to the 97th percentile in rate and advanced from the 45th to the 70th percentile in comprehension. Diane advanced from the 69th to the 88th percentile in rate and advanced from the 82nd to the 88th percentile in comprehension. The over-all factor noticed in this group was an evident gain in rate with corresponding gain or retention of comprehension scores. It seemed to show that better readers can become still better readers.

It was obvious that many students, especially the poor readers, had a change in attitude toward reading. They seemed anxious to read; confident that they were improving and that they could continue to improve. That observation, subjective though it was, provided greater satisfaction than any statistical evidence of reading progress.

SOME RESERVATIONS

Several questions can be raised. How lasting was this gain in reading skill? Was the improvement due to the use of the tachistoscope or was it due to the motivation supplied by the enthusiasm of the instructor and the class? Were the silent reading exercises with the individual reading records responsible for the progress? Was there any correlation in reading gain

with I.Q. or with visual acuity? Certainly it should be emphasized that this was not a research project; it was rather an attempt in the classroom to meet the needs of the students with the resources at hand. There were many uncontrolled factors, but it is evident that worthwhile progress was a result.

SOME CONCLUSIONS

What are the conclusions that can be drawn from this experiment in a reading improvement program? It ought to indicate that we can do something to help students learn to read better without extracting them from a normal classroom situation and placing them in the glare of the spotlight of special treatment. It would certainly cause one to question the wisdom of the practice of picking out the slow reader and requiring him to take an additional English course when he is already on the defensive because of his difficulty in reading. The experiment revealed that the slow readers were helped to make a significant gain in their reading ability in an unsectioned class. The evidence further points to the fact that the middle group or so-called average readers can make significant progress in this sort of class. It was revealed also that the rapid reader could benefit by substantially improving his reading rate and comprehension. It further indicated that time can be spent on a reading improvement program along with the regular study of literature without curtailing or "watering down" the established course content.

The Film-Reader Program*

Roberta Leestma

Reading is a process of symbolic interpretation. Words are the symbols the reader must interpret. Words are non-pictorial abstract symbols that bear no visual resemblance to the things they represent. The printed word *d-o-g* does not look at all like the friendly four-footed neighborhood animal that barks and wags its tail. Quite understandably, then, learning to read—learning to get correct visual pictures and concrete meanings from abstract non-pictorial symbols—is usually a difficult task for youngsters.

SOME PROBLEMS IN THE TEACHING OF READING

Reading instruction must be closely related to the experiences of the learners if the learners are going to enjoy much success in perceiving meaning in the abstract symbols that words are. A big problem in this respect is the tremendous *variation in experience* among the various members of an average class. Not only will there be a variation in the *kind* of experience the various class members have had, but also in the *amount* of experience. The need for a common denominator of experience as a basis for beginning reading has long been accepted, and such techniques as the experience story have been widely used to help achieve the necessary common background of experience.

Another major problem in the teaching of reading is *stimulating and maintaining*

* *Elementary English*, XXX (February, 1956), 97-101.

pupil interest, interest in the difficult task of learning to manipulate lifeless abstract symbols that actually represent exciting real experiences. The teaching of reading has traditionally suffered from rote memory exercises divorced from actual experience. Drill on meaningless and uninteresting (to the child) abstractions has understandably caused many children to develop a deep resentment against reading and, by association, against the rest of the school situation as well.

Interest and experience are closely interrelated. Effective learning is most likely to occur when emphasis is placed upon experiences that are particularly challenging to the children, experiences which they are eager to talk about, work on, and remain interested in.

Immaturity for reading constitutes another major problem. It is sometimes caused by an unstimulating environment. As Albert J. Harris points out in his book *How To Increase Reading Ability*:

Some children come to school without ever having gone more than a mile or two from their homes, without ever having seen a zoo, a boat, or a circus, without ever having looked inside the covers of a picture book or having had a story read to them. Their limited experience naturally results in a scanty vocabulary and a restricted stock of ideas.

In such instances the importance of broadening the child's experience is obvious.

The problem of learning to read is further complicated by the *need to know the*

aural form of the word as well as the visual form: to be able to understand it when it is spoken and to be able to pronounce it correctly.

Wouldn't it be helpful if we had tools for teaching beginning reading that somehow provided for a common denominator of experience; that helped associate for that experience; that provided for effective association between the experience, the word symbols for the experience, and the sound of the word symbols; that held the children's interest throughout the entire process and motivated them to do more reading; and that broadened the children's understanding of the natural world and their social environment through an experience of interest to them and within the range of their comprehension?

NEW TOOLS FOR TEACHING READING

Promising new tools for teaching reading that help accomplish such goals are now available. These tools are the coordinated use of selected educational motion pictures and their correlated film readers. These film readers were developed by Encyclopaedia Britannica Films in cooperation with book publishers D. C. Heath and Company and Row, Peterson and Company.

The basic common experience is provided by an Encyclopaedia Britannica sound film designed for the elementary grades and a correlated reading book that has been especially developed for use with the film. The films are authentic and interesting treatments of topics that are important to children. They are standard elementary curriculum films that are readily available for rental from most film libraries and are locally owned by many school systems. All but one are ten minutes in length.

The film reader is an attractive thirty or thirty-six page book closely correlated with the film. On each page of the film reader is an enlarged picture from a significant sequence in the film. Each picture

is presented in the order in which it appeared in the film, and hence the sequential nature of the experience is preserved.

At the time of the film showing, the pictorial experience was interpreted verbally in the sound track of the film. The children have been exposed to the spoken words in context by means of the film, and thus an understanding of the relationship between the spoken symbol and the thing it represents is developed.

Accompanying the picture on each page is a series of sentences closely related to the picture. These sentences contain certain of the spoken words and phrases used in the sound track of the film. Thus, a relationship between the printed symbols and the spoken symbols is established.

A key factor in the film-reader technique is the establishment of an easy link between the spoken words in the film and the printed words in the reader. The still picture on each page of the reader provides this link. The still picture provides a bridge between the film experience of picture and spoken word and the printed words in the reader.

CURRENT FILM READERS

At present, three sets of film readers are available. Each set contains eight film readers, each reader bearing the title of the Encyclopaedia Britannica film with which it is correlated.

Two sets are published by D. C. Heath and Company under the general series title of "It's Fun To Find Out." The Heath sets were prepared under the direction of Dr. Paul Witty. One set is designed for second grade and the other for third grade. The titles in the second grade set are: *A Day at The Fair*; *The Food Store*; *The Fireman*; *Farm Animals*; *Gray Squirrel*; *The Mailman*; *Shep, The Farm Dog*; and *Three Little Kittens*. The titles in the third grade set are: *Airport*, *Billy and Nanny*, *Bus Driver*, *Doctor*, *Elephants*, *Tugboats*, *Visit with Cowboys*, and *Circus Day in Our Town*.

Simple questions about the story are included at the end of each book, along with a list of words from the text under the heading, "Can You Use These Words?" The questions contain the words learned in the story in new and different contexts. This provision is included to provide opportunity for the child to read to learn—under circumstances favorable to success. It is important for children to begin early to experience satisfaction in using reading to secure new information. Because the child *understands* the words he has learned in his film and reader experience, he is likely to experience success and satisfaction with the words in slightly different contexts.

The different context of these sentences provides a check on reading ability, especially comprehension. If there are any children who have just memorized the story without really understanding the words, they can be spotted. Each book contains thirty pages.

The other set is published by Row, Peterson and Company and is correlated with films from Encyclopaedia Britannica's "Children of Many Lands" film series. These readers were prepared under the direction of Mabel O'Donnell and Elizabeth Bloss, and are designed for fourth and fifth grades. The titles in this set are: *English Children*, *Spanish Children*, *Children of China*, *Children of Japan*, *Norwegian Children*, and *French Children*.

Key words are repeated throughout each story, and pronunciation guides are included on the pages where unfamiliar words are first introduced. The back of each book contains a glossary of selected new terms in the text, and also a picture map of the country with which the book deals. Each book contains thirty-six pages.

All three sets of books are very attractive and very satisfactory in vocabulary, sentence structure, format, size, clearness of print, and sharpness of pictorial detail. All of the readers can stand alone and serve as self-contained supplementary read-

ers, as well as perform their special function as film readers. They can be obtained from the publishers or from Encyclopaedia Britannica Films as a part of complete units (films and readers).

UTILIZATION

Patterns of utilization vary, especially where the films are owned by the school system. In the common pattern of procedure, the teacher first previews the film and/or consults the film guide in order to become familiar with the objectives of the film and the film's approach to achieving those objectives. Familiarity with the film enables the teacher to plan for its effective use (relating it to material already studied, explanation of new concepts to be developed, identification of things to look for, etc.).

Then the class is prepared for the film. The children learn the major purposes for seeing the film.

The film is then shown under satisfactory projection conditions.

Immediately after the showing, the teacher and class discuss the film and the objectives it was intended to serve. Discussing the film experience not only reviews the experience and helps the children master the spoken words presented in the film, but permits the teacher to clarify any misunderstandings in meaning or pronunciation of narration and film content.

After the class has discussed the film, the film readers are distributed to the children, and it is explained that the books tell about the story in the film they have just seen and discussed. The teacher directs the attention of the children to the pictures in the book and points out (if the children do not) that the pictures are actually taken from the film they just saw. The teacher then explains that the printed words with each picture in the film reader tell practically the same story the film narrator told. The children may then take turns reading aloud.

After the story has been read aloud, a variety of follow-up activities can be developed. The children might answer questions on the content of the book, based either on oral or silent reading. The children may be called upon to read and answer the questions in the book. When it is apparent that the children can read the book with comprehension, they may be asked to use the newly learned words in sentences of their own. The film might be shown again without the sound, with the children narrating the film as it is being projected silently. The entire film-and-reader experience may be used to stimulate children to discuss their own experiences in the area covered by the film, to develop an experience story based on the film and reader, to draw or paint pictures about the film story, to motivate participation in dance and musical activities related to film content, to take a field trip, or to motivate other correlated activities.

THE VALUE OF THE FILM-READER EXPERIENCE

The value of these new tools for teaching reading seems readily apparent and easily understood. The film provides a common experience and vocabulary for the entire class, and one which contains familiar concepts and words as well as new ones. Children who see the film and discuss it are familiar with and understand the vocabulary of the film narration and the pictorial content that it describes.

The correlation of an illustrated reader with a sound film permits a clear and direct association between the pictures and spoken words of the film and the pictures and printed words of the reader. The illustrated, correlated reader enables the pupils to transfer their film experiences into reading experiences.

The motion picture presentation of a story tends to be inherently interesting to children; it is a medium with which they have had experience (including television) and of which they approve. This interest

is carried over into the illustrated reader which tells the same story. Interest is also reflected in a noticeable growth in the pupils' oral expression, an important gain in itself and a vital link in the reading chain. (Written expression is likewise often improved, by interest as well as because the children have more concrete experiences to write about.)

The narrator's voice and delivery provide a good model for the pupils in their pronunciation and oral reading and a model which they may tend to imitate. The model of the narrator may help the pupils achieve a smoother oral reading performance, rather than the common word-by-word reading pattern so typical of beginning readers.

Because the readers tell the same story as the film, there is a four-fold exposure (seeing, hearing, telling, reading) to the vocabulary of the story via the media of film, discussion, and book, and to the concepts for which the vocabulary is the vehicle. This effective and integrated repetition in meaningful context helps develop the meaning of words quickly, and increases the speed and skill of contextual recognition of words. Appreciation of various meanings of an individual word and depth of understanding are likewise facilitated.

There is an important value present in the fact that pupils and teacher share the experience together. They can understand each other much better when they discuss and read about the experience. Because they have shared the experience together, misunderstanding in communication between them will be minimized.

The integrated use of the films and their correlated readers form an effective link between the desire to read and the act of reading. The child's mastery of reading is increased through his enjoyment of the reading experience and the association of the reading with actual experience. The film and reader combination develops the child's confidence in his reading ability and

encourages him to attempt wider reading in a variety of materials.

Experience to date with the film-reader program has shown that all of the above values may be present and operate effectively for the great majority of pupils. Slow learners are as enthusiastic over the integrated use of films and correlated readers as are bright pupils, and rapid progress has been made by all groups and all kinds of children. (An interesting experiment with Spanish-speaking children in the Southwest has shown that the film-reader program may be a valuable aid in learning to speak English as well as in learning to read it!)

Let one point be made clear: film readers are not being represented here as a panacea for all the problems in teaching reading. Film readers are not a substitute for basic readers nor for a variety of reading materials in a developmental reading program. Film readers will not replace systematic instruction and drill in the funda-

mentals of word analysis, phonics, and the like.

Films and their correlated readers are represented here only as being new tools for teaching beginning reading, tools especially useful in providing common experience and vocabulary to a class of children in an interesting and understandable fashion. The integrated use of films and their correlated readers provides a new and effective way for helping young children make the connection between the abstract and the concrete, between the word and the thing it represents. The film-reader technique helps children put meaning into words and thereby enables them to get meaning out of words.

The film-reader technique stimulates a young child to read, enables him to read with understanding, and makes reading enjoyable and possible with less anguish and frustration than is often otherwise possible. Any technique that accomplishes all of these things deserves serious consideration and wider utilization.

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Evaluation of Reading Films

William Eller

Reading films have been used as an aid to faster reading by adults ever since Harvard University began experiments in 1936. Inasmuch as the extensive growth in reading improvement courses for high school, college, and adult readers has taken place since World War II, most of the use of reading films has occurred since the war. By now, thousands, if not millions, of mature readers have been taught with

reading films, and numerous appraisals of film effectiveness have been made by instructors and by students. Some of these evaluations were made in response to the inquiries of the film producers; others were simply informal comments collected by reading teachers in the course of their day-to-day work with the films.

Before attempting to evaluate the effectiveness of reading films in speed read-

ing training, it may be desirable to consider exactly how these films are expected to contribute to faster reading. Most mechanical devices used to increase reading speed are planned to counteract one or more of the four habits which usually accompany inefficient reading: (1) short span of recognition, (2) unnecessarily long fixation time, (3) frequent regressive movements or (4) sub-vocalization. Of the major mechanical aids to rapid reading, reading films deal more specifically with all four of these problems than any other type of device.

Span of recognition refers to the amount of printed matter recognized by the reader each time his eyes focus in the process of reading. Dr. Miles A. Tinker of the University of Minnesota, who must certainly be the world's leading authority on eye movements in reading, has found that the average adult reader sees only a little more than a single word each time his eyes focus—or fixate. Tinker's research further indicates that this same "average adult" can easily learn to see about four words at each fixation. Both of the widely-used batteries of reading films, the Harvard Reading Films and the Iowa Reading Films, are designed to extend the reader's span of recognition by presenting stories in phrases, with each phrase visible on the screen for only a fraction of a second. The phrases are presented in typical reading fashion in that they proceed across the screen from left to right and down the screen from top to bottom. Only one phrase of the story is distinctly visible at any given moment. Since the stories are presented in phrases instead of by individual words, and since each phrase is on the screen for such a short time, the reader is more or less forced to read by phrases instead of word-by-word. After a certain amount of this film-reading, the typical student has markedly lengthened his span of recognition.

The second of the bad habits—long fixation time—is dealt with at the same time. Because each phrase is visible on the screen

for less than a second, long fixation times are impossible, and the reader must learn to recognize the phrases quickly, otherwise he will miss some of the continuity of the film story. Since each phrase disappears from the screen after its brief appearance, regressive movements are futile—there is nothing to be seen by looking back. Therefore the third factor associated with inefficient reading is treated by the films as regressive movements go unrewarded and tend to disappear.

Reading films also help to get rid of the fourth-listed cause of slow reading, sub-vocalization, but in a less direct manner. A reader who sub-vocalizes says each word to himself as he reads it, even though he may not move his lips or make any sound. It is apparent that this places a limitation on his rate of reading, because he can read silently much faster than he can talk. When reading films are used in a speed reading course, each film story is usually presented at a slightly faster pace (in words per minute) than the story which was used during the preceding training period. For example, if a film story was presented at 265 words per minute on Monday, the story rate for Wednesday might be about 280 words per minute. As the rate of presentation increases, day after day, eventually a speed is reached which prohibits sub-vocalization simply because the reader cannot "talk" fast enough to say the words to himself and still keep up with the film story on the screen.

Following the consideration of the rationale of reading films, it should be appropriate to consider their apparent or logical advantages and limitations. Many reading specialists feel that the chief advantage of reading films—as well as most other mechanical devices—is motivational. It is quite likely that motivation is helped considerably by the films since the approach is novel, the students' attitude toward motion pictures is generally good, and the presentation doesn't resemble "book reading" too much. However, if the film stories are of

inappropriate difficulty or interest, or if the teaching is ineptly handled, the film program could have a negative effect on motivation.

In connection with motivation, an appropriate question is: How do the students feel about reading films after they have been taught partly by film? Surveys of students enrolled in reading improvement courses at Texas A & M College and Oklahoma University have indicated that the learners consider the films worthwhile. When asked to name the materials and instruments most helpful to them in learning to read more efficiently, the students ranked reading films second, just slightly below reading pacers.

As to the limitations of reading films, the most obvious is their lack of adaptability to individual differences. Usually the films are used with groups of students; even when an attempt is made to group the students homogeneously according to reading rate, the story is often presented too rapidly for some readers and too slowly for others. A few of these slow readers need to be "pushed" more than they would push themselves if they were using individual reading devices (pacers) which permit them to read at a speed that is comfortable. For such readers the day-by-day acceleration of the film speeds can be an advantage. However, many of the slower readers who complain about the speed of presentation are such inefficient readers that they couldn't possibly read the film stories, and for such students, some other non-film program should be substituted, or at least they should not be expected to conform to the reading speeds of the bulk of the class.

As the rate of film-story presentation increases in words per minute, day after day, some students find that they are unable to keep up with the group. The slower students can be accommodated in various ways. If they cannot be separated from the rest of the group, the increase in speed can be made less irritating to them if the new

film to be presented during the class period is preceded by one or two of the films already viewed during previous sessions. If the slow readers can be separated from their classmates, it often proves helpful. If one or more films of each speed can be shown during two or three consecutive class periods before any faster films are used. Also, most motion picture projectors have some speed control, so it is often possible to regulate the speed of story presentation by simply controlling the projector speed.

Some of the more rapid readers in a class may complain that they can read 600 words per minute from standard printed sources more easily than they can read 450 words per minute from a film. They find that the film phrases are too short or that the fixation times are too long for comfortable and efficient reading. To eliminate this source of annoyance, some instructors feel that it is desirable to use reading films only until students can read a little faster than 400 words per minute. After this speed is attained, the films are abandoned in favor of other materials. The new series of Iowa Films (College and Adult Series) was planned to minimize this complaint; the first five films (slowest five) have three phrases per line of print, the next five films have two phrases per line, and the last five do not have the lines divided into phrases but allow the reader to phrase to suit his own comfort.

A few students indicate that they are bothered by the irregularity of increases in speed from film to film. Among the Iowa Films the gain in speed from one day to the next may be 25 words per minute, but the next day's increase may be only 10 words per minute. It seems doubtful that this inequality of acceleration is very serious. It is more likely that the student difficulties arise from varying degrees of interest in the context, varying story difficulties, and fluctuating conditions of projection. As a matter of fact, when two films are shown during the same class period, it is not un-

common for some students to insist that the slower film actually presented its story faster.

The conditions of projection, mentioned in the preceding paragraph, are of tremendous importance in reading film usage and undoubtedly contribute a great deal to the satisfactions or dissatisfactions which result from the reading program, although sometimes neither teachers nor students suspect that faulty equipment has been a factor. For ordinary projection of motion pictures in school situations, quite acceptable results are attainable with only mediocre equipment. However, when the learners are expected to read rather small print in long phrases at high speed, it is imperative that the projection conditions be ideal. Projection bulbs of insufficient wattage, damaged screens and other mechanical inadequacies can ruin an otherwise good reading program. The instructor should demand perfect focus of the projecting lens at all times.

Two common complaints about reading films are not serious enough to provoke worry, although they deserve some explanation. The first is that reading from films is extremely artificial. This would be a legitimate complaint if the reading improvement were sought through the films alone, but the distributors of both the Harvard and Iowa series have provided supplementary reading materials which are to be used in conjunction with the films. When these particular materials are not used, reading instructors almost always employ some other typical reading selections, such as magazine articles. There are a number of good reading workbooks on the market which include speed reading practice material.

The final complaint to be considered is usually offered by someone who has had only limited contact with reading films and

who is perturbed by what he calls the "unrealistic arrangement of the phrases." Sometimes a single phrase will contain the end of one sentence and the beginning of the next. The experienced instructor is not bothered by this and the students do not complain about it because both instructor and students have discovered that rhythmic reading is more important than neatly arranged phrases. In fact, it is fairly obvious that a rapid reader does not read in units consisting of neat phrases, because he doesn't know where the "meaningful" phrases are going to begin or end if he is reading the selection for the first time. The only way a rapid reader could read an unfamiliar article in what some people would call meaningful phrases would be to have these phrases marked somehow before he began reading.

A final question in the evaluation of reading films, and perhaps the most important one, concerns their effectiveness in helping students to become faster readers. There have been numerous studies which demonstrated that adult readers taught with a film program increased their reading speeds from 50% to 125%. The State University of Iowa has on file many reports of such results recorded by the users of its films. However, many investigators have achieved almost as much improvement in speed of reading without the use of mechanical devices, although the film programs usually show a slight superiority over the non-film courses.

In conclusion, there seems to be no doubt that reading films perform a useful function in reading improvement courses for adult readers, but, like most mechanical approaches to education, they should be used in conjunction with other good teaching materials rather than by themselves.

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